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The Relationship of Depressive Symptoms, Self-Esteem, and Sexual Behaviors in Urban Men at Risk for Human Immune Deficiency Virus and Sexually Transmitted Diseases

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THE RELATIONSHIP OF DEPRESSIVE SYMPTOMS, SELF-ESTEEM, AND SEXUAL BEHAVIORS IN URBAN MEN AT RISK FOR HUMAN IMMUNE DEFICIENCY VIRUS AND SEXUALLY TRANSMITTED DISEASES

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Abstract

Men who have sex with men (MSM) have been a persecuted and stigmatized group during many points in history. This group experienced further marginalization when HIV infection emerged in 1981, and predominately affected this population. This persecution, stigmatization, and marginalization probably affect the mental health of this population. When MSM experience depressive symptoms and lowered self-esteem, does this have an effect sexual behaviors? This quantitative research study examined the relationship of depressive symptoms, self-esteem, sexual behaviors, and selected demographic variables. A sample MSM representing the diverse ethic composition of South Florida was sampled using survey research to discover the relationship of these aforementioned variables. Data that is collected were analyzed using a variety of parametric and non-parametric statistics.

Dedication

I would like to dedicate this dissertation to my grandmother, Lucy L. De Santis (1924-2002) who first encouraged me to study nursing and the rest of my family who have supported my decision to further my education.

I would also like to thank the following people for their assistance and support during this process:

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CHAPTER I: THE PROBLEM

Background of the Problem

Gay men, or homosexuals, have been the focus of controversy in world history (Bidstrup, 2001). In Ancient Greece and Rome, male-male relationships were common and accepted by these societies. In fact, a few Roman emperors were known to have sexual relationships with other men in addition to women. In certain Native American and African continent tribes, gay men played important roles in these cultures and occupied positions of status in society. Since they were viewed as possessing the spirits of both men and women, they fulfilled an important role in the religious rituals of these cultures (Bidstrup, 2001).

In the Western world, the Judeo-Christian perspective influenced views on male homosexuality. Judeo-Christian tradition teaches that homosexuality is immoral, aberrant, and corrupt since it is counter-productive to procreation. In sharp contrast to the acceptance by earlier cultures, gay men were persecuted and often executed for their sexual preference. In fact, the derogatory slang term "faggot" that is sometimes used today to describe gay men originated from the bundles of wood called "faggots" that were used to burn at the stake those who were condemned for crimes such as homosexuality. This persecution resulted in homosexual men suppressing and hiding their sexual preferences and behaviors from members of society, their families, and even from themselves (Bidstrup, 2001).

This persecution and execution of gay men continued into the 20th century. Just as many European Jews were imprisoned and executed by German Nazis, many male

homosexuals experienced torture and execution in the concentration camps during the Holocaust (Kulkami, 2004).

Homosexual males in the United States fared slightly better than their European counterparts, but experienced discrimination and stigmatization especially during the McCarthy era (Kulkami, 2004). Many homosexual men were arrested, harassed, and sometimes brutalized by society including law enforcement. During the 1960's in New York City, the "Stonewall Inn," a popular gay club, was subjected to police raids on a regular basis. In 1969, the patrons of this club challenged the police and participated in several days of rioting. These riots drew media attention and led to the development of gay rights groups. Combined with the feminist movement of the 1970's, the gay rights movement gained momentum and caused society to re-examine its views on this controversial topic. Another victory for gay men was the removal of homosexuality as a mental health condition from the *Diagnostic and Statistical Manual of Mental Health Disorders* in the early 1970's. Although many gay men continued to experience stigmatism, discrimination, and isolation, societal views of this population were slowly changing (Kulkami, 2004).

With this threat behind them, many gays moved to large cities such as New York City and San Francisco to live in gay communities and to explore their sexual freedom. To celebrate this newfound sexual freedom, many gay men had numerous sexual partners and were infected with certain sexually transmitted diseases (STDs) or infections. In fact, a rite of passage into the gay lifestyle involved a visit to the health department for treatment of an STD (Shilts, 1987).

In 1981 the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia described a new disease that was affecting groups of gay men in San Francisco, Los Angeles, and New York City in the United States. These men experienced rare infections that were previously only observed in those who were severely immune suppressed from other illnesses. Although these men did not have a history of any other chronic illness, they were diagnosed with opportunistic infections such as *Pneumocystis carinii* pneumonia (PCP) and Kaposi's sarcoma (KS). The only factor these men had in common was that they were men who had sex with other men (MSM). Once it was identified that this was a sexually-transmitted infectious disease and it was termed Gay Related Immune Disorder (GRID) and later termed Human Immune Deficiency Syndrome or HIV (Bartlett & Gallant, 2004). Many gay men were infected and died from HIV infection during the 1980's and 1990's since treatment was not available for this infection (Centers for Disease Control and Prevention, 2004).

With the development of this new infectious disease that was more prevalent in gay men than in the general population (Centers for Disease Control and Prevention, 2004), gay men were once again the subject of controversy. Since acquisition of this disease was related to sexual behaviors, some members of society once again condemned homosexuality and homosexual behaviors. Society, however, had adopted a more positive view of MSM, partially perhaps MSM had gained empathy because of the affect that HIV infection had on this population.

Despite a certain degree of prejudice and marginalization that still exists today, gay men in the United States enjoy wider acceptance by society, are more positively portrayed by the media, and no longer must fear imprisonment or death as compared to

previous centuries. Although MSM are not yet afforded the same protection of rights as heterosexuals, this population has made tremendous strides toward equality (Bidstrup, 2001).

With HIV infection came a new term for gay or homosexual men. Since it could not be assumed that all men who had sex with other men were exclusively gay or homosexual, a new term was generated that described the behavior, not the sexual preference. The term MSM is used to describe any man, regardless of self-identified sexual orientation or marital status, who engages in any type of sexual activity with another man, including men who self-identify as exclusively gay or homosexual; bisexual men who have sex with both men and women; and men who have sex with men but do not identify themselves as gay or bisexual. The politically-correct term used in the HIV literature is “men who have sex with men” (Mallinson, 2003).

With the emergence of HIV infection, many gay men developed healthier lifestyles including participation in safer sex behaviors. Safer sex includes behaviors that do not involve the exchange of bodily fluids (Strong, DeVault, & Sayad, 1999). HIV infection, however, was not as frightening to the younger generation of MSM who did not experience the early days of the epidemic. Since HIV infection could be controlled with medications, safer sex messages of the 1980’s suddenly were being ignored. As early as 1993, writers warned that an increase in the HIV infection rates of MSM was again on the increase (Gross, 1993). Wolitski, Valdiserri, Denning and Levine (2001) agreed that there were increasing rates of new HIV infections in MSM despite adequate knowledge about HIV infection and prevention messages that were targeted toward this population. Today MSM continue to have the highest incidence of HIV infection

nationally (Centers for Disease Control and Prevention, 2004), and in the state of Florida and (Florida Department of Health, 2003).

With this information, one may wonder what would cause MSM to continue to engage in sexual behaviors that could endanger their health, despite adequate knowledge and prevention messages that were targeted to this population. Could societal, ethnic/racial, economic, or psychological issues or variables influence participation in unsafe sexual behavior despite knowledge of the potential of HIV infection? With the impact that HIV/AIDS has had and is continuing to have on the health of MSM, a study that would examine some of the variables that may influence MSM to engage in sexual behaviors that may result in acquisition of HIV or STDs is warranted.

Purpose of the Study

From the history of MSM and the risk of HIV infection from sexual behaviors, a purpose of the study can be generated. Since MSM have a history of persecution, stigmatization, and risk for HIV, MSM probably have experienced and may continue to experience marginalization from the general population. It is not known what effect this marginalization may have on the population of MSM, but these factors contribute to the population of MSM being viewed as a vulnerable population. Vulnerable populations are at risk for health problems related to resource availability and relative risk (Flaskerud & Winslow, 1998). The purpose of this study is to determine via survey research the effects that certain variables have on the sexual behaviors of urban MSM. These selected variables include depressive symptoms, self-esteem, and demographic variables such as age, ethnicity, length of time living in the United States, country of birth, employment status, source of income, total income, relationship status, and level of education.

Problem Statement

As the HIV epidemic enters its third decade, MSM continue to be the group that is most affected by HIV infection (Centers for Disease Control and Prevention, 2004). Although infection rates may have decreased in Caucasian MSM since the early days of the epidemic, infection rates among African-American and Hispanic men continue to rise (Centers for Disease Control and Prevention, 2004). Since the majority of these studies have surveyed Caucasians as the majority of the participants in the studies (Dilley, McFarland, Sullivan, & Discepola, 1998; Janssen, Strong, & Vukadinovic, 2003; Kelly, St. Lawrence, & Brasfield, 1991), this needs to be taken into consideration when focusing this study. With this identified gap in the knowledge base, this study attempted to sample as many African-American and Hispanic MSM, with the goal to have the sample mirror the demographics of Miami-Dade County, Florida. Currently, in this county, 60% of the residents are Hispanic; approximately 20% are African-American/Caribbean Black; 10% Caucasian; and 10% belong to other ethnic groups (Miami-Dade County Department of Health, 2003). Although it is possible to know the numbers of MSM who are infected with HIV, it is not possible to know the total number of MSM. It has been estimated that about 10% of the adult male population of the United States is exclusively homosexual (Kinsey, Pomeroy, & Martin, 1948). Kinsey, Pomeroy, and Martin (1948) found that 50% of the men in their study had male-male relationships with 38% of these men experiencing an orgasm during this sexual experience with another man.

Despite public health interventions to educate this population of the potential for infection with HIV from participation in high risk sexual behaviors, these behaviors continue in this population. Many factors probably contribute to participation in high risk

sexual behaviors in this population (Mallinson, 2003). In order to identify and understand a few of these factors, such as depressive symptoms, self-esteem and certain demographic factors, that may influence sexual behaviors, a study such as this is warranted.

Research Questions

In reviewing the information that forms the background of this problem, research questions can be generated. This study's research questions are:

1) What effect does depressive symptoms and self-esteem have on the sexual behaviors of urban MSM?
2) What differences in levels of depressive symptoms, self-esteem, and sexual behaviors exist between different ethnic groups?
3) What effect do selected demographic variables (such as age, education, employment status, source of income, annual earnings, relationship status, and country of origin) have on depressive symptoms, self-esteem, and sexual behaviors?

The rationale for inclusion of these demographic, or attribute variables, was drawn from the review of the literature on depression, self-esteem, and sexual behaviors in MSM. All demographic variables that are to be included were documented as having an effect on one or more of the study variables in the research literature on this population. These effects of these demographic variables and the rationale for their inclusion in this study will be discussed in Chapter II.

Significance of the Study to Nursing

It is anticipated that the results of this study will be significant to nursing in terms of practice, policy, research, and theory development. In terms of clinical practice, this

study will contribute information that may be useful for nurses who work with this population. Specifically, information obtained from this study can be used to develop nursing interventions for MSM that are preventative in focus. For example, if this study demonstrates that depression and self-esteem contribute to participation in high risk sexual behaviors in this sample of MSM, nursing interventions can be generated that target and address both depression and self-esteem in this population. Nurses who work with this population will need to be educated about the findings of the study so that these tested interventions can be incorporated into the nursing care that is delivered to members of this population. If the results of this study indicate that mental health conditions such as depression and alterations in self-esteem influence sexual behaviors in MSM, a change in focus in the manner in which care is delivered to this population can occur. For example, care delivery for this population can adopt a preventative approach in addressing mental health issues with MSM by screening all members of the population and referring for psychological treatment any client with depressive symptoms or problems with self-esteem.

In terms of policy, this study addresses a leading health indicator in the Healthy People 2010 goals for residents of the United States. Specifically, one of the ten indicators that have been identified is responsible sexual behavior, including avoidance of unsafe sexual behaviors. Responsible sexual behavior is important to decrease sexually transmitted infections and HIV infection. These behaviors are all related to unprotected sexual behaviors. The overall goal of responsible sexual behavior is to increase the number of people who practice protected sexual intercourse, but sub-goals have also been developed. One of these sub-goals is to decrease the number of new cases of HIV

infection among MSM by 25 percent by the year 2010 (Health Resources and Services Administration, 2000).

This study is important in that it is congruent with governmental policy, and that it adopts a preventative approach to the problem of the steady rates of new HIV infection. Preventative approaches are consistent with primary prevention practices that examine the relationship between social, environmental, and risk factors that influence health. Primary prevention is aimed at clients who are at risk for engaging in high risk behaviors that may lead to disease acquisition (Stanhope & Lancaster, 1996). Studies that adopt this preventative approach are needed as these studies look at factors that may influence unsafe sexual behaviors in MSM. If these factors are identified and interventions can be developed to address these factors, perhaps the HIV infection rate can be decreased in this population.

Also in terms of policy, it is anticipated that this study could be used to provide support for the American Nurses' Association's (ANA) (1997) position on HIV/AIDS. Since it is projected that the majority of this study's participants will be composed of ethnic minority men, such as African-Americans and Hispanics, this study's results could be useful to policy makers of this organization. The ANA (1997) notes that nursing interventions should be culturally-based if they are to be effective in reducing HIV infection rates in ethnic minority populations. The knowledge generated by this study may aid in increasing cultural awareness of nurses by increasing the knowledge of ethnic MSM.

In terms of research, this study will contribute to the knowledge base of this topic. Since this study will be building on the existing knowledge base of Caucasian MSM, this

study could also fill some gaps in the scientific knowledge, as will be discussed in the review of the literature in Chapter II. This study could also serve as a point of origin for more research studies with this population. An example of a future study that may be spawned from this study could be a study that tests interventions to address depression and self-esteem in this population.

Theory development could also be enhanced by this study, as this study will be testing the relationships of the concepts of the Vulnerable Populations Conceptual Model. Relationships of the model's concepts of resource availability, relative risk, and health status as applied to the population of MSM are unknown. The degree to which these concepts have an influence or effect on each other could also be uncovered via this study. Since the model at this point is heuristic in nature, testing of the model's concepts and the strengths of the relationships is necessary (Flaskerud & Winslow, 1998). This study would allow theory testing of this model with the population of MSM.

Theoretical Framework

The overall theoretical framework that will guide this study is Flaskerud and Winslow's (1998) Vulnerable Populations Conceptual Model. According to Flaskerud and Winslow (1998), vulnerable populations are groups who are at a higher risk than the general population for morbidity and mortality because of limited resources. Flaskerud and Winslow (1998) have noted in their model that MSM are a vulnerable population.

The Vulnerable Populations Conceptual Model (1998) includes the components of resource availability, relative risk, and health status. Resource availability includes both human capital (employment, socioeconomic status, education, housing, social support, and social status) and environmental resources (access to health care, quality of

health care, and environmental constraints such as violence and crime). Relative risk includes the exposure to risk factors such as lifestyle, behaviors, personal choices, and physical and psychological health factors that impact the morbidity and mortality of vulnerable populations. In terms of this study, resource availability includes the demographic variables such as age, ethnicity, length of time living in the US, country of birth, employment status, source of income, total income, relationship status, and educational level. This lack of resources increases the relative risk that includes sexual behaviors and self-esteem. Relative risk, in turn, would predict health status that includes depressive symptoms (J.H. Flaskerud, personal communication, March 16, 2005).

The Vulnerable Populations Conceptual Model (1998) also notes three relationships between resource availability, relative risk, and health status. The first relationship is between resource availability and relative risk, with a decrease in resource availability resulting in an increase in relative risk. The second relationship is between relative risk and health status, with an increased exposure to risk resulting in increased morbidity and mortality. Morbidity and mortality may in turn, increase exposure to other risk factors. The third relationship is between health status and resource availability. The population's health status, expressed in terms of morbidity and mortality, could affect the available resources of the community in which the population resides. Research, practice, ethics and policy analysis form the core of the model and influence the components of the model and the relationships between components (Flaskerud and Winslow, 1998). Figure 1 below provides a pictorial presentation of The Vulnerable Populations Conceptual Model. Appendix A includes permission of the model's author to use and reproduce the model.

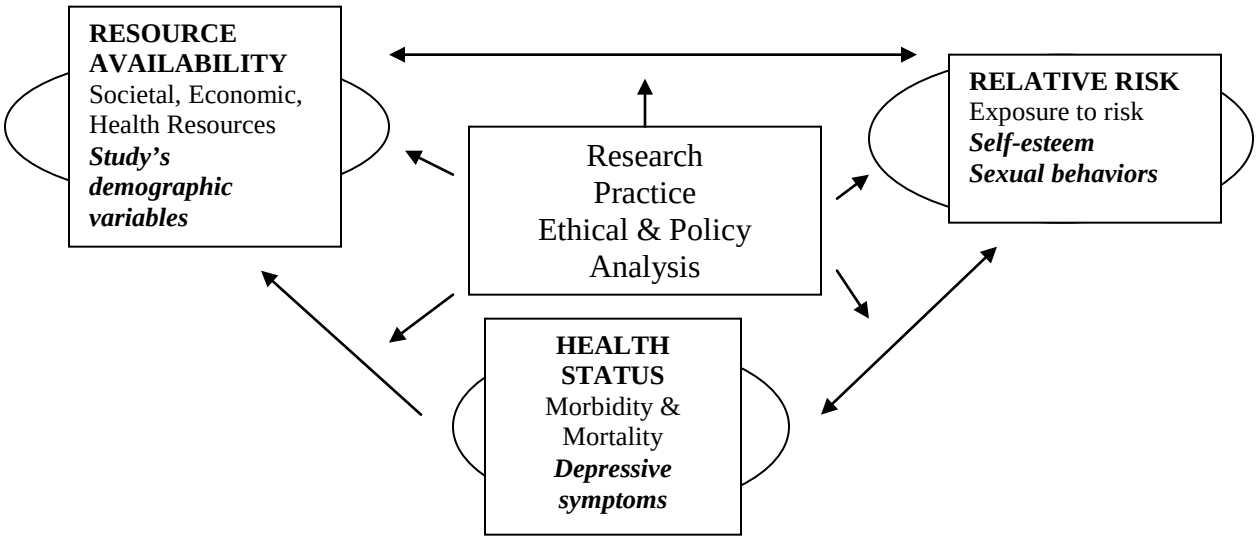


Figure 1: Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998) depicting the relationship between the theory's concepts of resource availability, relative risk, and health status and the relationship of this study's variables to the model ***(in bold italics).***

The research questions that were generated for this study are congruent with the study's theoretical framework. The Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998) notes the relationship between societal and environmental resource availability, relative risk, and health status which is expressed in terms of morbidity and mortality. All three research questions are congruent with this model, as all three research questions fit with the model's three concepts. If MSM do not have adequate resources such as income, employment, education, access to health care, and the ability to cope with physical and psychological stressors (resource availability), this may influence participation in behaviors such as high risk sexual behaviors or substance abuse problems (relative risk) that could result in infection with HIV that ultimately affects the client's morbidity and mortality (health status).

Study Assumptions

This study contains both theoretical and research assumptions. In terms of theoretical functions, the Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998) contains assumptions that must be noted. These theoretical assumptions include:

1) Vulnerable populations have an increased risk for adverse health outcomes.
2) Risk is caused by decreased social and/or economic status and the lack of resources.
3) Certain groups are considered vulnerable because of discrimination, intolerance, marginalization, disenfranchisement, or political reasons.
4) Communities, not individuals, are responsible for the health of their members.
5) A relationship exists between resource availability, relative risk, and health status (Flaskerud & Winslow, 1998).

In terms of research assumptions, the following must be noted:

1) It must be assumed that the methodology is appropriate for answering the research questions.
2) It must be assumed that the research instruments selected to measure the variables actually measures the variables under investigation, and not some closely related variable.
3) It must be assumed that data analysis techniques utilized to analyze and interpret the data are appropriate (Creswell, 2002).
4) It is important that the researcher's biases will not influence the participants or the results of the study (Slife & Williams, 1995).

5) The researcher is assuming that adequate numbers of participants can be recruited to enroll in the study.

6) It must be assumed that that participants have the appropriate reading and comprehension level necessary to participate in the study.

7) Participants must freely participate in the study and it is assumed that they will provide honest, complete answers to the questions included in the research questionnaire.

Definition of Terms: Conceptual and Operational

In order to understand the variables that will be studied, definitions of the variables of depressive symptoms, self-esteem, and sexual behaviors are necessary. These definitions include the conceptual definitions of the variables, as well as the operational definitions.

Depressive symptoms

Depressive symptoms can be defined as a psychological condition of mood and thought that includes both psychological and physical symptoms. The psychological symptoms include a loss of interest in pleasurable activities; thoughts of sadness, hopelessness, pessimism, guilt, worthlessness, helplessness, and thought changes including difficulty concentrating. Physical symptoms include weight changes, a decrease in energy levels, sleep changes; and complaints of other persistent physical complaints (American Psychiatric Association, 2000). Depressive symptoms can be measured as a total score on the Center for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977).

Self-esteem

Self-esteem can be defined as a positive or negative view of the self. Self-esteem is a component of self-concept that also includes self-efficacy and self-identity. An individual's self-esteem includes the ability to cope successfully with challenges in life. Self-esteem can be measured by the total score on the Rosenberg Self-Esteem Scale (RSE). (Rosenberg, 1989).

Sexual Behaviors

Sexual behaviors can be defined as any activity or any type of expression that occurs between two humans that is used to convey feelings of sexual expression. Sexual behaviors include both penetrative (vaginal, anal, or oral sexual acts) and non-penetrative (mutual masturbation, petting, or massage) behaviors (Strong, DeVault, & Sayad, 1999). Sexual behaviors can be measured as a total score on the Safe Sex Behavior Questionnaire (SSBQ). (DiIorio, Parsons, Lehr, Adame, and Carlone, 1992).

Hypotheses

Three hypotheses will be tested in this study. A hypothesis will be developed for each research question.

Hypothesis 1: Depressive symptoms and self-esteem will have a significant effect on sexual behaviors.

Hypothesis 2: Depressive symptoms, self-esteem and sexual behaviors will vary by ethnic group.

Hypothesis 3: Demographic variables will have a significant effect on depressive symptoms, self-esteem and sexual behaviors.

Scope and Delimitations of the Study

As will be discussed in Chapter Two, a large number of studies that have been conducted on the population of MSM have been reviewed. Numerous variables have been researched to determine their effect on sexual behavior in MSM. It is important to focus the variables that will be investigated in this study. As stated previously, a considerable amount of research has been conducted on this population, researching different combinations of variables. The main focus of this research study is to note the effect of depressive symptoms and self-esteem on sexual behaviors.

Depressive symptoms were chosen as a variable as many studies of depression focus on women (Carr, Gilroy, & Sherman, 1996; Gratch, Bassett, & Attra, 1995; Jack & Dill, 1992; and Smolak & Munstertieger, 2002). With it being noted that MSM are at risk for depression (Gilman, Cochran, Mays, Hughes, Ostrow, and Kessler, 2001; Stall, Mills, Williamson, Hart, Greenwood, Paul, et. al., 2003), it is important to study this variable's effect on sexual behavior in this population.

The variable of self-esteem was included because of its relationship to depression (Radloff, 1977). It has been noted that the effect of self-esteem on overall functioning of MSM is unclear and variable (Martin & Knox, 1997), so the study of self-esteem is warranted to test the effects of this variable on this population.

Sexual behavior was selected as a variable after careful consideration from the review of the literature on this subject. Many studies of sexual behavior include condom use as a measure of sexual behavior (DiIorio, Dudley, Kelly, Soet, Mbwara, & Potter, 2001; DiIorio, Dudley, Soet, Watkins, & Maibach, 2000; Lindemann & Brigham, 2003; and Sherman, Celentano, McGrath, Chard, Gangakhedkar, Joglekar, et. al., 2003). In this

study, sexual behavior was included in place of condom usage since safer sexual behavior is more than the simple use of condoms during sexual intercourse. For example, safer sex behaviors include, but are not limited to, talking to sexual partners about their sexual history, and avoidance of drugs and alcohol during sexual intercourse (DiIorio, Parsons, Lehr, Adame & Carlone, 1992).

Demographic variables that are included in this study must also be limited. Although there are a large number of variables that could be included in this study, the demographic variables need to be limited. Too many variables will make the research questionnaire too lengthy to be quickly and easily completed by the participants. The inclusion of a large number of variables that are not noted in the literature and that may not be significant to the study will cause the study to become too broad and less-focused. Unnecessary variables also may cause the data analysis process to be more cumbersome (Salkind, 2000). In this study, only variables that support the study will be included.

Summary of Chapter I

MSM have been disproportionately affected by HIV infection since the beginning of the epidemic over two decades ago (Centers for Disease Control and Prevention, 2004). Noting the infection rates of this population, combined with the fact that HIV infection now affects more ethnic minority MSM than Caucasians, the rationale for conducting this study is evident. By focusing the study on the identified variables and by limiting the number of demographic variables that will be included, a more accurate picture of the effect that the variables under investigation have on sexual behavior of MSM can be obtained.

CHAPTER II: REVIEW AND CRITIQUE OF THE LITERATURE

Introduction

Chapter II presents a review and a critique of the existing literature of the variables under investigation in this study: depressive symptoms, self-esteem, and sexual behaviors in MSM. A brief literature review on vulnerable populations is included before beginning the literature review on the variables under investigation. The literature review includes only research-based sources with selected keywords and is limited to a specified period in time, as is discussed later, in order to focus the literature review. A review of each variable will occur, with a critique of the existing literature immediately following the review. A brief summary in Chapter II presents the state of the science on depressive symptoms, self-esteem, and sexual behaviors in MSM.

Research on Vulnerable Populations

A theory of vulnerable populations provides the theoretical foundation for this research study. MSM have been described as a vulnerable population in the literature (Flaskerud & Winslow, 1998), but only within the context of HIV infection (De Santis, 2004). Since not all MSM are infected with HIV, this conceptualization is not appropriate.

Research with vulnerable populations has been a focus of nursing for some time. The majority of the nursing knowledge on vulnerable populations has focused on health disparities within certain populations that are defined as vulnerable. Flaskerud, Lesser, Dixon, Anderson, Conde, Kim, et al., (2002) conducted a review of research articles published in *Nursing Research* from 1952 to 2000. Criteria for inclusion in this literature review included that the source must address the concepts of the Vulnerable Populations

Health Related Research model (resource availability, health status, and relative risk) (Flaskerud & Winslow, 1998). The authors found that the focus on vulnerable populations varied by decade. In the 1950's, not all the concepts of resource availability, health status, and relative risk were addressed. In the 1960's, research focused on the health disparities of different ethnic groups in terms of morbidity and mortality. In the 1970's, research on vulnerable populations addressed the perceptions of nurses and clients on health and the use of healthcare services. The 1980's saw two new directions for vulnerable populations: the influence of culture and health on vulnerable populations and an examination of socially-vulnerable groups within the context of healthcare. There was another shift in the 1990's that continues to the present: the development of methods to measure health disparities, a focus on psychosocial risk factors, and the increase of intervention studies to address vulnerability and health disparities. None of the articles reviewed for the literature review addressed vulnerability in the population of MSM (Flaskerud, et al., 2002), although MSM as a population is congruent with the Vulnerable Populations Model (J. Flaskerud, personal communication, March 16, 2005).

In order to conceptualize this population as vulnerable, the origins of Vulnerable Populations Health-Related Research model (Flaskerud & Winslow, 1998) must be explored. The Vulnerable Populations Model (1998) is one of the few sources on vulnerable populations that views MSM are a vulnerable population without linking the population to HIV infection. Although the Vulnerable Populations Model (1998) has not been applied to the population of MSM, the model is research-based. The model's concepts of resource availability, relative risk, and health status were generated from the studies that have been conducted on these concepts, with the majority of these research

studies being drawn from nursing and related disciplines. In addition, this model was influenced by Aday's (1993; 1994) work on vulnerable populations. Even though this model has not been tested empirically, Flaskerud and Winslow (1998) have developed numerous implications for research that involve research design, methodological issues, measurement, access to vulnerable populations, and ethical issues that stem from this Vulnerable Populations Model.

Sources for the Literature Review

In order to locate literature on these variables under investigation, library search engines such as AIDSLINE, MEDLINE, PUBMED, CINAHL, and PsychLIT were employed. The literature review was limited to research-based articles and was limited to the years of 2000 to 2005 unless the articles were considered essential to the literature review. Key search words included depression, depressive symptoms, self-esteem, sexual behaviors, gay men, homosexual men, and MSM.

Depressive Symptoms in MSM

Kelly, St. Lawrence, and Brasfield (1991) studied factors that influenced continued participation in high risk sexual behavior in MSM despite attendance at an HIV prevention session. Sixty-eight MSM were followed over a 12 week period. The sample was comprised of 94% Caucasian and six percent African-American and Hispanic. The average age of the participants was 32.7 years (*SD* not reported). Participants completed a measure of sexual activity that was developed by the investigators of this particular study, the Beck Depression Inventory (BDI) to measure depression (Beck, Ward, Mendelson, Mock & Erbaugh, 1961), the State-Trait Anxiety Inventory (Speilberger, Gorsuch, & Lushene, 1970), the Health Locus of Control scale to

measure self-perceived control of health (Wallston, Wallston, & Devillis, 1987), and the AIDS Risk Behavior Knowledge Test that measured participants' knowledge of HIV/AIDS (Kelly, St. Lawrence, Hood, & Brasfield, 1989). Using multivariate discriminate analysis, the researchers selected the coefficients of larger than -.30 to .30 as meaningful predictors. The MSM who were more likely to engage in high risk sexual activity include those who were younger in age (r= -0.39), those who engaged in unprotected anal intercourse (UAI) with more sexual partners (r= 0.01), those who had more sexual partners (r=1.00), those who were intoxicated during sexual activity (r= 0.57), and those with lower depression scores (r= - 0.38). This study is interesting in that the MSM who resumed unsafe sexual behavior had lower depression scores than those who practiced safer sex behaviors. From the discriminate analysis, the researchers concluded that they could predict those who would return to high risk sexual behavior about 86 percent of the time. A concern about this study is that it surveyed a large number of Caucasians, and included only a small number of African-American participants.

Dilley, McFarland, Sullivan, and Discepola (1998) studied psychosocial factors that influenced participation in UAI in MSM (n=55) who attended a support group for those who were not infected with HIV. Participants were followed over a 10 week period. Fifty-five participants completed the study, with the majority (78 percent) being Caucasian, with an average age of 37. The participants were well-educated with 55% having a postgraduate degree. Sixty-seven percent were not involved in a long-term relationship. In addition to the support group services that the men received, participants completed measurements of depression using the Beck's Depression Inventory (Beck,

1978); Sacco's Condom Attitude Scale, a measure of attitudes regarding condom usage (Sacco, Levine, Reed & Thompson, 1991); a safer sex survey (Hay, Turner & Coates, 1992); and knowledge of HIV using Kelly's AIDS Risk Behavior Knowledge Test (Kelly, 1995). Using bivariate analysis, the researchers concluded that UAI was associated with lower knowledge of HIV/AIDS (*OR*=0.46, *CI*=0.23-0.94; *p*=0.032), lower social support (*OR*=3.2, *CI*=1.1-9.2; *p*=0.03), and a lower levels of commitment to participation in safer sex behavior (*OR*=0.68, *CI*=0.50-0.91; *p*=0.009). Using multivariate analysis, the researchers noted that self-control (*OR*=2.8, *CI*=1.4-5.8; *p*=.006), knowledge of HIV/AIDS (*OR*=0.28, *CI*=0.11-0.71, *p*=0.007), and social support were significant (*OR*=3.7, *CI*=0.83-17; *p*=0.085) for engaging in lower risk sexual behavior. The effect of depression on sexual behavior was not significant (*OR*=0.94, *CI*=0.16-5.8; *p*=0.96). The researchers concluded that certain psychosocial correlates, as described previously, could have an effect on UAI. A limitation of this study is that its sample was comprised of mostly Caucasians with a large number with postgraduate degrees. This sample is probably not representative of the population of MSM.

Zea, Reisen and Poppen (1999) examined the psychological well-being of Hispanic MSM and lesbians. The researchers sampled 106 Hispanic gay men and lesbians who attended a Hispanic gay event in Washington, DC. Very limited demographic information was reported and the demographics were not stratified by gender (sex). The sample included 36% women with 33% born in the US. Average age of the sample was 33 years (*SD not* reported, range 20 to 53 years). Nearly 60% had a Bachelor's degree with 50% of the sample reporting an income from $20,001 to $40,000.

Although none of the women reported being infected with HIV, 16% of the men reported HIV infection. Using an anonymous questionnaire that was completed at the event that took place in Washington, DC, or was returned to the researchers through the mail, the participants completed the Behavioral Attributes Psychosocial Competence Scale that measures active coping (Zea, Reisen, & Tyler, 1996); the Quality of Social Support Scale that measures social support (Goodenow, Reisine, & Grady, 1990); Collective Self-Esteem Scale (CSE) that measured identification with the Hispanic community (Luhtanen & Cocker, 1992); Rosenberg's Self-Esteem Scale was used to measure self-esteem (Rosenberg, 1965); and the Beck Depression Inventory (BDI) to assess depression (Beck, Steer, & Garbin, 1988). The researchers reported that no differences were noted between HIV-infected and HIV-negative men in terms of depression scores ($t(51)=.92$, $p> .05$) or self-esteem scores ($t(51)= -.22$, $p> .05$). In terms of depression, 11% were mildly depressed, 16% were moderately depressed, with only one severely depressed ($M=3.69$, *SD* not reported). The mean for self-esteem was 3.48 (*SD* not reported). The researchers concluded that the sample had a high self-esteem despite some indication of depression. Multiple regression that predicted depression and self-esteem was conducted. Participants reporting higher levels of coping ($B= -0.34$, $t(91)$, $p< .001$) and higher levels of social support ($B= -0.39$, $t(91)= -4.00$, $p< .0001$) were less likely to be depressed. Participants reporting higher levels of social support ($B=0.25$, $t(91)= -2.47$, $p< .02$), active coping ($B=0.38$, $t(91)= -3.85$, $p< .001$), and higher CSE scores or group membership ($B=0.24$, $t(91)$, $p< .03$) were more likely to have a higher self-esteem. The researchers concluded that identification with the Hispanic community serves as a buffer to depression and lower self-esteem in a majority of the participants. Although this study

has limited usefulness because the researchers did not report separate demographics and research results by gender, it is one of only a few studies to address these issues with a purely Hispanic sample, although it surveyed both male and female participants. This study would have been strengthened if it surveyed Hispanic MSM and lesbians separately since they are two distinct groups with very distinct and different issues.

Safren and Heimberg (1999) researched the relationship between depression, suicidality, and substance abuse in gay and lesbian adolescents as compared to heterosexual adolescents. Participants completed measures of sexual orientation, social support using the Social Support Questionnaire, coping style using the COPE, life stress using the Adolescent Perceived Events Scale, depression using the Beck Depression Inventory, hopelessness with the Beck Hopelessness Scale, suicidal behaviors with the Suicidal Behaviors Questionnaire, substance abuse with the Personal Experience Screening Questionnaire, and social desirability with the Marlowe-Crowne Social Desirability Scale. All instruments with the exception of sexual orientation had established reliability and validity. The sample consisted of 56 lesbian and gay youth and 48 heterosexual youth generated from the Philadelphia area. The lesbian and gay sample was collected first and then matched with heterosexual youth of the same age, sex, and ethnicity. The gay/lesbian adolescents were 48 percent (n=27) African-American, and 32 percent (n=18) Caucasian. The average age of the gay/lesbian youth was 18.4 years (SD=1.6), and the heterosexual youth was 17.9 years (SD=1.6). The authors reported that *Chi-square* analysis on the sample in terms of gender, education, and ethnicity revealed no significant differences between the two groups. Regression analysis was used to examine the effects of sexual orientation, depression, sexual orientation, and

hopelessness. In the first step of the analysis, depression was significant (R^2=.12, F=2.99, df=4,88, p< .05), but when sexual orientation was entered, depression was no longer significant (R^2=.14, F=2.86, df=5,87; p> .05). When the effect of sexual orientation and suicidal ideation was entered in the second regression analysis, depression (R^2=.35, F=9.45, df=5, 87, p< .001) and social support (R^2=.35, F=9.45, df=5, 87, p< .05) were significant predictors of suicidal ideations, with gay and bisexual youth reporting higher levels of depression, hopelessness, and suicidal behaviors. The researchers concluded that sexual orientation had a significant impact on the mental health of the gay and lesbian participants and that interventions should be developed to address this issue. This study is important in that focuses on the unique mental health needs of gay and lesbian adolescents. Although this dissertation research study will not include participants less than 18 years of age, this study by Safren and Heimberg (1999) was included since some participants in the dissertation study could be between the ages of 18 and 22. Since many consider the period of adolescence to continue until the age of 22, these participants could be viewed as adolescents.

Sandfort, de Graaf, Bijl, and Schnabel (2001) conducted a study in the Netherlands that examined same-sex sexual behavior and mental health disorders. Using face-to-face interviews of over 5,000 clients, 82 men and 43 women identified themselves as homosexual. For the purposes of this paper, only the men's data will be included. Of the 82 men, the mean age was 39.2 years (*SD* not reported), with 52.9% reported a college degree and 51.2% reporting a relationship. Ethnicity of the men was not reported, but it can be assumed that the majority of men were Caucasian given the fact that the study occurred in the Netherlands. The researchers reported that homosexual

men were more likely to report a mood disorder diagnosis over the past year via self-report (17.1%) than heterosexual men (5.2%) (Odds ratio, *OR*=2.93, *CI*=1.54-5.57, *p*< .05), with major depression (9.8%, *OR*=1.96, *CI*=0.88-4.37, *p*< .05), dysthymia (3.7%, *OR*=2.72, *CI*=0.75-9.86, *p*< .05), and bipolar disorder (4.9%, *OR*=5.02, *CI*=1.50-16.84, *p*< .05) more common in homosexual men than heterosexual men when age, level of education, rural versus urban living, and relationship status are controlled. Lifetime prevalence of mood disorders was also higher in homosexual men versus heterosexual men (39.0% versus 13.3%, *OR*=3.11, *CI*=1.91-5.05, *p*< .05). Although this study demonstrates that MSM are more at risk for mental health conditions, it may be of limited usefulness since the study was conducted outside the US. Also, even though the study demonstrates the prevalence of mental health conditions of MSM, it does not explore any relationship between mental health issues and sexual behavior.

Gilman, Cochran, Mays, Hughes, Ostrow and Kessler (2001) researched the risk of mental health disorders in males and females in same-sex relationships. Using data from the National Comorbidity Survey (NCS), a household survey of Americans aged 15 to 54 years, the study was conducted from 1990 to 1992. Using a large sample (*n*=5,877), the interviewers identified 74 men and 51 women who reported same-sex relationships. The MSM in the survey (*n*=74) had an average age of 34.0 years (*SD*=8.5) with 12.3 years (*SD*=2.3) of education and a mean household income of $34,379 (*SD*=19,282). Almost three-quarters (71.3%) of the male participants were Caucasian with 12.1% African-American and 12.5% Hispanic. The prevalence of any mood disorder (including depression, bipolar disorder, etc.) was 11.7% (*SE*=3.4) as compared to 8.0% (*SE*=0.7) (p< .05); the prevalence of major depression (10.3% (*SE*=3.4) versus

7.2% (*SE*=0.7), p< .05); and the prevalence of dysthymia (1.9%, *SE*=1.1) versus 2.0 % (*SE*=0.3). The researchers did not offer any explanation for this occurrence, but noted that further research is required to replicate and attempt to identify the causal agents of these disorders in same-sex couples.

Paul, Catania, Pollack, Moskowitz, Canchola, Mills, et. al. (2002) examined the lifetime prevalence and antecedents of suicide attempts in gay and bisexual men. Using telephone interviews from 1996 to 1998, the researchers surveyed 2,881 MSM. The telephone survey included MSM who resided in Chicago, Los Angeles, New York City, and San Francisco. The dependent variable in the study was suicidality, with demographics including childhood adverse circumstances, age of first sexual experience with a male, age of first disclosure as gay, and experiences of antigay harassment. Suicidality was assessed by self-report. The majority of the sample (79%) was Caucasian, with only 4% African-American and 9% Hispanic. Seventy percent of the participants had a Bachelor's degree or higher. Forty-six percent of the participants had an income between $20,001 and $60,000. Seventy-three percent were employed full-time. Seventeen percent of those surveyed reported that they were HIV-infected. The researchers utilized logistic regression to examine the antecedents of suicidality. The first logistic regression revealed that those who were 25 years of age between 1971 and 1980 had the highest risk of suicidality (*OR*=0.67, *CI*=.039-1.17, *p*< .05). The second highest risk of suicidality in the first logistic regression was a history of repeated childhood physical abuse (*OR*=2.13, *CI*=1.45-3.13, *p*< .05). The second logistic regression revealed that those who turned 25 since the year 1990 had the highest risk of suicidality (*OR*=125.48, *CI*=12.56-1254.04, *p*< .05). Those who disclosed

sexual orientation zero to five years before the suicide attempt were more likely to attempt suicide (*OR*=114.61, *CI*=21.37-614.60, $p < .05$), and those who had their first sexual experience with a man less than five years before the suicide attempt were more likely to attempt suicide (*OR*=37.37, *CI*=6.35-219.93, $p < .05$). The authors concluded that US gay and bisexual males had a three-fold increase in suicide in suicide attempts as compared to heterosexual males with the risk higher in younger years.

Diaz, Ayala, Bein, Henne, and Marin (2001) examined the impact of homophobia, poverty, and racism on the mental health of gay and bisexual Hispanic men in New York (*n*=309), Miami (*n*=302) and Los Angeles (*n*=301)in 1998 and 1999, for a total sample of 912 men. This study was built upon a qualitative study that was conducted in 1996 and 1997, but neither the results of this study nor the reference for this study were included in this article. The qualitative data provided items that were included in data collection in this study. Participants completed items on psychological distress; experiences of homophobia, racism, and poverty; social isolation and self-esteem; and resiliency that flowed from the qualitative study. Participants were 77.1% immigrants with 52.6% in the US for 10 years or less. About one-third preferred to utilize Spanish as their primary language. The group had a mean age of 31.2 years (*SD* not reported) with 64.2% having some college education or more. The researchers were surprised to find that participants reported an unemployment rate of 27.3%. HIV infection was reported in 21.8% of the participants. Eighty percent of the participants reported a sad or depressed mood at least once over the past six months, with 22% reporting feeling sad or depressed many times over the past six months. Seventeen percent reported suicidal ideations at least once in the past six months, with two percent reporting suicidal ideations many times over the

past six months. In terms of homophobia, 10% (*CI*=7-12, *p*< .0003) reported being the victim of violence as an adult; 64% (*CI*=59-69, *p*< .0019) had to pretend to be straight; and 29% (*CI*=25-33, *p*< .0019) had to move away from their primary family to live their lives as a homosexual. Using stepwise regression, the researchers discovered that social isolation (*b*=0.27, *t*=5.43, *p*< .0001), low self esteem (*b*=0.21, *t*=3.17, *p*< .01), homophobia (*b*=0.09, *t*=2.05, *p*< .05), and poverty (*b*=0.33, *t*=4.85, *p*< .0001) had an influence on the mental health of Hispanic MSM. The factors that were not significant included racism (*b*=0.04, *t*=1.05, *p*< .30) and resiliency (*b*=0.03, *t*=1.60, *p*< .11). The researchers concluded that mental health issues in Hispanic MSM are related to issues of alienation, low self-esteem, and psychological distress. Although this study does not examine the impact that these variable could have on high risk sexual behavior, or risk for HIV infection, this study is valuable as it provides some insight into a few of the issues affecting Hispanic MSM.

In terms of the effect of psychosocial health problems on sexual behavior, only a few studies could be located that attempt to shed some light on this issue. Bancroft, Janssen, Strong, and Vukadinovic (2003) researched the relationship between mood (including depression) and sexuality, or sexual behavior in MSM. Using a mixed methods design, the researchers surveyed 662 Caucasian MSM for the quantitative portion of the study. The average age of the sample was 35.7 years (*SD*=10.8, range 18 to 80). A large percentage of the participants, 93 percent, had completed college, 73 percent were employed full-time, 61 percent considered themselves members of the middle class, and nearly half (48.3 percent) were not involved in any type of relationship. Of those who had been tested for HIV in the sample, 80 (15.2 percent) were infected with

HIV. Participants completed the Mood and Sexuality Questionnaire (MSQ) which measures the effect of mood on sexual desire (Bancroft, Janssen, Strong, & Vukadinovic, 2003); the Zemore Depression Proneness Ratings (ZDPR) which measures the potential or risk of depression (Zemore, Fischer, Garratt, & Miller, 1990); the Spielberger Trait Anxiety Inventory (STAI) which measures anxiety (Spielberger, Gorsuch, & Lushene, 1970); the Sexual Inhibition/Sexual Excitation Scale (SIS/SES) which measures the potential for sexual activity in spite of the risk of sexual inhibition and the Sensation Seeking Scales which measures the degree to which participants seek sexual sensation via sexual activity (Janssen, Vorst, Finn, & Bancroft, 2002). Results of the quantitative portion revealed that sexual activity increased by 16 percent over a 6-month period, with seven percent reporting an increased erectile response during sexual activity when depressed. When participants reported anxiety (which is correlated with depression), 24 percent of the participants reported that they were more interested in sexual behavior. Using *t*-tests to compare the sexual activity of those who were depressed as compared to those who are not depressed, those who were depressed reported more sexual activity than those who were not depressed (t=12.1, df=573, p< .001). In terms of anxiety, those who were more anxious reported more sexual activity than those who reported less anxiety (t=8.3, df=579, p< .001). In the qualitative portion of the study, 42 MSM participated in interviews that lasted an average of 45 minutes. The participants were asked questions regarding current sexual practices, regrets regarding sexual practices, the impact that the sexual regrets had on sexual risk taking, and moods in terms of depression and anxiety. Although the researchers did not report the results of the qualitative data in themes, the researchers concluded that depression had a more complex relationship to

sexual activity than anxiety. Sexual activity in the context of depression was not only related to a need to participate in sexual activity, but may be related to the need for validation via physical and emotional contact. Some of the participants reported that when they were depressed, they were more likely to take sexual risk and not to be concerned about the long-term consequences of the risky sexual behaviors. Using the results of the quantitative and qualitative data, the researchers concluded that the fact that some of these men engaged in high risk sexual behavior when depressed required further exploration.

Stall, Mills, Williamson, Hart, Greenwood, Paul, et al. (2003) examined the association mental health problems, defined as any psychiatric diagnosis self-reported by the participants, and vulnerability for HIV infection in urban MSM. Interviewing 2,881 MSM in Los Angeles, San Francisco, Chicago, and New York, the researchers assessed drug use, depression using the CES-D, partner violence, and childhood sexual abuse (CSA). Precise demographics were not reported, but the researchers noted that the majority of the participants were Caucasian, with only 21% with an ethnicity other than Caucasian, and 43% earned less than $40,000 per year. Using multivariate logistic regression, researchers noted that men age 18 to 29 were at risk for drug use (OR=2.38, p< .05) and partner violence (*OR*=1,66, *p*< .05). Men 30 to 39 were also at risk for drug use (*OR*=1,97, *p*< .05) and partner violence (*OR*=1.71, *p*< .05). HIV-infected men were at risk for drug use (*OR*=2.05, *p*< .05) and partner violence (*OR*=1.49, *p*< .05). Drug use (*OR*=1.88, *p*< .05), CSA (*OR*=1.39, *p*< .05) and presence of partner violence (*OR*=1.64, *p*< .05) was associated with participation in high risk sexual behavior. The researchers also reported that high-risk sexual behavior increases as the number of psychosocial

health problems increase, that is, those with no psychosocial health problems (7.1%) reported engaging in high risk sexual behaviors less often than those with three or four psychosocial health problems (22.5%) ($p < .001$). HIV prevalence is more common in those with three or fours psychosocial health problems (22.4%) compared with those with no reported psychosocial health problems (13%) ($p < .001$). This study, unfortunately, did not report the relationship between high-risk sexual behavior and depression in the regression analysis. The authors concluded that HIV prevention interventions in MSM need to include the psychosocial health conditions of MSM in addition to the focus on sexual risks.

Summary of Depressive Symptoms in MSM

Based on the research studies that were included in this literature review, all but two of the studies reviewed (Dilley, et al., 1998; Kelly, et. al., 1991) found that MSM were likely to experience depression. From this review of the literature, it could be concluded that MSM are at risk for depression, but the results of some these studies could be questionable for a number of reasons. First, six of the studies reviewed included relatively small sample sizes ranging from 55 to 82 participants. With small sample sizes, the chance of sampling error is increased. When sampling error is increased, an accurate picture of the population from which the sample is drawn is not achieved (Salkind, 2000). Since the authors of these studies did not reveal how the sample sizes of these studies were selected, it is not known if these results are accurate.

Second, Caucasians comprised the majority of the samples of the studies that were included in the literature review. The lack of ethnic minorities as participants in these studies limits the generalizability of the findings to the general population of MSM

(Salkind, 2000). Since the population of MSM consists of more ethnic groups than Caucasians, these sample sizes do not represent the entire population of MSM.

Third, a few of the studies reviewed (Diaz, et al., 2001; Gilman, et al., 2001; Paul, et al., 2002; Sandfort, et al., 2001) did not report which measure of depression that was used to measure this variable. Since it is unknown which instrument was used to measure depression, the results of these studies can not be compared to other studies that measure depression in MSM. In addition, since it is not known how depression was measured, the results of these studies could not be replicated to check or verify the results.

Lastly, only a few of the studies attempted to establish a relationship between depression and sexual behavior in this population. Without knowing the effect of depression on sexual behavior, the studies that have established that depression is common in MSM can only be used to provide a descriptive account of this phenomenon in MSM. Findings tend to support that MSM are more likely to be depressed when compared to heterosexual men (Safren, et al., 1999; Paul, et al., 2002), although it remains unclear if MSM are depressed because of sexual orientation or because of other psychosocial factors, it is important for researchers to ascertain what effect this has on the sexual behaviors of MSM, especially in ethnic minority MSM.

Self-esteem in MSM

The second variable under investigation in this study is self-esteem. Self-esteem in MSM was first noted in the literature in 1973. Using the terminology of that time, the politically-correct term for MSM was homosexual men. A meta-analysis of self-esteem in gay men was conducted by Greenberg (1973). Thirty research articles were reviewed with 17 of the studies noting differences in self-esteem in gay and heterosexual men, with

six studies that reported that gay men had lower self-esteem scores; four studies that reported that gay men had higher self-esteem scores, and three studies reported conflicting results. Greenberg (1973) concluded that gay men may often feel alienated from general society, but that self-esteem did not differ between gay and heterosexual men.

Siegel, Mesagno, Chen, and Christ (1989) examined the factors that influenced participation in risky versus safer sex behaviors, including self-esteem, in MSM in New York City. Employing longitudinal sampling, these men were interviewed twice in a six month period. Forty-seven participants completed both interviews. Of the demographics reported, 91% were Caucasian; 61% were younger than 40 years of age; one-third earned more than $35,000 per year; and 45 percent reported some graduate education. Participants were asked questions about there sexual behaviors, perceptions of vulnerability to HIV, characteristics of their social networks, number of years of sex with men, drug/alcohol use during sex, and self-esteem as measured by the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Before data analysis, the sexual behaviors that the men reported that they engaged in were classified by the researchers as risky or safer behaviors. Using the *t*-test to compare the MSM who engaged in risky versus the safer behaviors, the researchers found that the only variables that were significant were emotional support (t=2.27: risky=3.04, *SD=0.65* versus safer=2.74, SD=0.64, p=0.026), number of years of homosexual sex (t=2.40; risky=19.06, SD=10.13 versus safer=14.49, SD=8.74, p=0.018), and drug use during sexual activity (t=5.23: risky=0.68, SD=0.47 versus safer=0.21, SD=8.74, p=0.000). The differences in self-esteem were not significant (t=1.04, risky=33.55, SD=4.50 versus safer=32.53, SD=5.24, p=0.300).

When all variables were entered into a regression analysis, the same variables were predictors of risky behavior: emotional support (F=0.454, p=0.001); number of years of homosexual sex (F=0.396, p=0.005); and drug use during sex (F=0.834, p=0.000). Self-esteem was not significant (F=0.226, p=0.112), and therefore was not a predictor of risky behavior in this study. The researchers concluded that drug use during sex was most significant and that educational interventions need to be developed that address the use of drugs during sexual activity. A weakness of this study is the relatively small sample size and the over-representation of Caucasians in the sample.

Savin-Williams (1995) studied 317 lesbian, gay and bisexual adolescents and young adults and concluded that the self-esteem of these adolescents was comparable to that of heterosexual adolescents. Savin-Williams (1995) continued his research on this topic by focusing his study on the effect of timing of pubertal maturation and self-esteem in gay and bisexual males. The participants in the study were 83 gay and bisexual teens from 17 to 23 years of age. The mean age for the group was 20.9 years (*SD* not reported). About 80% of those surveyed were college students. Only 16% were minorities, with a small number of Hispanics (n=7) and African-Americans (n=3) who participated in the study. A comparison group of 403 heterosexual males ages 17 to 23 years also participated and served as a comparison group. Mean age for the heterosexual group was not reported. Participants completed the demographic questionnaire, a sexual behavior questionnaire, and the Rosenberg Self-Esteem Scale. After completing the items, a qualitative interview was conducted. The self-esteem of the gay and bisexual group (M=22.4, SD=5.8) was compared with the heterosexual group (M=23.2, SD=4.2).

The researchers concluded that no differences existed in self-esteem between these two groups ($t(481)=1.17$, $p> .10$).

Nicholson and Long (1990) conducted a study in Canada with 89 HIV-infected men. Participants were almost all Caucasian (n=87) with an average age of 35.7 years (*SD*=7.3), with 65% with some college education. About half (45%) were single. Participants completed the Nungesser Homosexual Attitudes Inventory that measures attitudes toward homosexuality (Nungesser, 1979); the Rosenberg Self-Esteem Scale that measures self-esteem (Rosenberg, 1965); the Revised Kaplan Scale that measures perceived social support (Turner, Frankel, & Levin, 1983); the Profile of Moods State (POMS) that measures mood over the past week (McNair, Lorr & Droppleman, 1971); and the Ways of Coping Scale (WOCS) that measures coping responses (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). Using hierarchical stepwise regression analysis, researchers concluded that self-esteem accounted for 14% of the variance ($F(1, 86)=14.36$, $p<.01$) with internalized homophia accounting for 16% of the variance ($F(1, 86)=18.35$, $p<.01$), for a total of 30% of the variance. The *beta* coefficients of a greater internalized homophobia ([beta]= -.18) and a lower self-esteem ([*beta*]= -.45) are associated with an increased use of avoidance coping to deal with HIV. The effect of homophobia and self-esteem on mood state accounted for 3% of the variance ($F(1,84)=45.67$, $p< .01$). The researchers concluded that homophobia and self-esteem were related to coping, with greater homophobia and lower levels of self-esteem resulting in more avoidant coping and the converse being related to more pro-active coping. The results of this study are significant, but the small sample size and the use of an almost exclusive Caucasian population give this study limited usefulness. In addition,

since the clients in this study are already HIV-infected, the results of this research tell us little about the overall self-esteem of MSM. Perhaps the men in this study have a lower self-esteem related to their HIV-infection status, not their sexual orientation.

Perkins, Leserman, Murphy, and Evans (1993) studied psychosocial factors that predicted high-risk sexual behavior in MSM who were not infected with HIV. Fifty-three MSM who resided in North Carolina completed measures of high risk sexual behavior generated by the authors; self-esteem using the Rosenberg Self-Esteem scale; the Hamilton Depression Rating Scale (HAM-D); and the Profile of Moods States (POMS) that measures anger and other moods; and measures of coping, emotional control, self-acceptance, and social conflict. The sample was 91 percent Caucasian with a mean age of 31 (*SD*=7), and a mean of 16 years (*SD*=2) of education. Safer sexual behavior in this study included the use of condoms during sexual activity. Using logistical regression, the researchers were able to test the effects of the psychosocial variables on sexual behaviors. No relationships were noted between sexual behavior and self-esteem *(OR*=0.5, *CI*=0.2-1.3, *p=.13)*, coping, and social conflict. The researchers did note, however, that participants who reported higher levels of depression were more likely to engage in high risk sexual behaviors (*OR*=3.4, *CI*=1.2-9.3, *p*=.02). In addition to the obvious weakness of over-representation of Caucasians included in the sample, the researchers failed to discuss the relationship between depression and high risk sexual behavior, that is, does depression result in high risk sexual behavior, or vice versa?

Rotheram-Borus, Rosario, Van Rossem, Reid, and Gillis (1995) studied behavior problems in gay and bisexual male adolescents in New York City. Participants included 136 male adolescents aged 14 to 19 years old (*M*=16.8 years, *SD*=1.4). The majority of

the adolescents were Hispanic (51%) and African-American (30%), with Caucasians comprising only 12% of the participants. Participants were paid to complete a 15 item conduct questionnaire, the Life Events Checklist, the Symptom Checklist-90 that measures anxiety and depression, the Rosenberg Self-Esteem Scale, the Sexual Risk Behavior Assessment Schedule for Youth, and questions about alcohol/drug use, sexual behaviors, delinquency, suicide attempts, gay-related events, academic events, and stressful life events. Results indicated that the adolescents used condoms less frequently during oral sex than anal sex. In terms of self-esteem, differences were noted between the gay adolescents (M=3.00, SD=0.57) and the bisexual youths (M=3.2, SD=0.40), but when the Bonferroni correction was applied for contrasts (.05/25=.002), no significant differences were noted. Overall, the self-esteem was about average at each encounter (M=3.1, SD not reported). Although this study is useful in that it provides an image of the stressors gay and bisexual adolescents face, but since it does not compare gay and bisexual youth to heterosexual youth, the study has limited usefulness to this paper. This limited usefulness is related to the fact that it does not attempt to draw any conclusions about the effect of sexual behavior and self-esteem on risk of HIV transmission.

Martin and Knox (1997) studied instability of self-esteem in relation to sexual behaviors in MSM. Employing a sample of 455 MSM, only five percent (n=23) were African-American, 7.3 percent were Mexican (n=33), and 18.7 percent (n=85) was American Indian. The remainder of the participants was Caucasian. A third of the participants had completed college (35.6%, n=162), and a third (33.3%, n=151) reported not being in any type or form of relationship. In addition to measures of intimacy, loneliness, social support, coping, and knowledge of HIV, the participants completed the

State Self-Esteem Scale (SSES), a 20-item instrument that measures participants' current level of self-esteem (Heatherton & Polivy, 1991). For data analysis, the participants were divided into three groups: those who have unprotected anal intercourse (UAI) with all partners, those who engage in UAI with only non-primary partners, and those who do not engage in UAI. Mean self-esteem scores were noted for those who engaged in UAI with all partners (M=345.9), those who engaged in UAI with only non-primary partners (M=434.8), those who engaged in UAI with primary partners (M=369.2), and those who did not engage in UAI (M=366.8). The authors noted that those who engaged in UAI with only non-primary partners had significant correlations between self-esteem and avoidance coping (r=.390, p< .01), loneliness (r=.415, p< .01), and support (r=.379, p< .01). Using ANOVA with Bonferroni post-hoc comparisons, those who engaged in UAI with any partners had higher levels of instability in self-esteem (F(1, 454)=3.37, p< .02) than those who did not engage in UAI (the statistics for this group was not reported). The researchers concluded that higher levels of self-esteem instability might be more likely to engage in high risk sexual behaviors than those with more stable self-esteem.

In one of the few qualitative studies that could be located that included self-esteem in this population, Robertson (1998) studied the mental health experiences of MSM in Scotland. The sample was composed of 37 Scottish MSM who participated in both group and individual interviews. The largest number of the participants (n=10) were between the ages of 35 to 44, with participants ranging in age from 21 to over 55 years of age. A grounded theory approach was used to analyze the interview data. Five major themes emerged from the data: coming to terms with one's sexuality, family and social interactions, development of self-worth/self-esteem, depression and suicide, and seeking

help. Since both depression and self-esteem are major variables in this dissertation study, only the results of these variables will be discussed. In terms of self-worth/self-esteem, the men reported that prejudice from within or outside of the family had a tremendous impact on self-worth/self-esteem. Isolation, guilt, and internalized homophobia often resulted from this prejudice that could be buffered only by internal resources and social support. In terms of depression and suicide, the researchers reported that depression most often resulted from stress from the hostile and isolating heterosexual world. Participants also reported that concealment of sexuality often resulted in feelings of guilt. Thoughts of suicide and the use of alcohol to aid in coping were also common in the participants. Although this study was conducted outside of the US and the results may not be able to be generalized to American MSM, this study is important to include in this review of the literature since themes relating to both depression and self-esteem in this population emerged from this study. The results of this study show that both depression and self-esteem are issues in this population.

Seal, Kelly, Bloom, Stevenson, Coley, Broyles, et. al. (2000) conducted qualitative interviews with young MSM to gather information from these men as to how to structure HIV prevention programs for this population. The investigators interviewed 72 young MSM from Milwaukee and Detroit. The interviews were conducted over a five month period. The participants ranged in age from 16 to 25 years (M=20.9). The sample was 45% Caucasian, with 32% African-American, 10% Hispanic, 8% biracial, 4% Asian, and 1% Middle Eastern. The average length of education was 12.2 years with a range of 10 to 16 years. The men were asked questions regarding their preferences of the content of HIV prevention programs, recommendations about needed community resources for

this population, and barriers for the development of programs and resources for young MSM. Although the specific qualitative data analysis technique was not discussed, the authors noted that the data was analyzed by themes. This, of course, is a concern when the researchers do not note their data analysis technique. Of interest to this literature review, one of the content recommendation themes that emerged from the interviews was self-esteem, self-worth, self-care, and self-love. The young MSM believed that this issue of self was very important to include in the content of the HIV prevention programs. Furthermore, the participants reported that low self-esteem, a lack of self-care/self-love, hopelessness, depression, and suicidal thoughts all contributed to unsafe sexual behaviors. Ethnic young MSM reported a sense of hopelessness in their lives that was related to the violence, poverty, and despair that they had experienced. Many young MSM voiced concerns about their futures and their concern about being able to maintain safer sexual behaviors in spite of the feelings of despair. The researchers concluded that for HIV prevention programs to be successful with this population, HIV prevention specialists need to incorporate the suggestions that were generated by these participants.

Summary of Self-Esteem in MSM

Based on the research studies that comprise the literature review on self-esteem in this study, a few conclusions can be drawn from the literature. As was found in the literature review on depression, the results of the studies that focus on self-esteem may be questionable based on their small sample sizes and the over-representation of Caucasians as study participants (Salkind, 2000).

In addition, from the studies reviewed on self-esteem, it is unclear if self-esteem differs between MSM and heterosexual men, since Savin-Williams (1995) reported that

difference in self-esteem do not exist in these two groups of men, while Rotheram-Borus, et al., (1995) reported that there differences in self-esteem was noted in the two groups. Whether the difference in self-esteem in MSM and heterosexual men is of importance to know for research purposes, it must have some significance since these two studies focused on this issue. At this point, all that is known is that it is unclear if there are difference in self-esteem between MSM and heterosexual men.

Lastly, based on the literature review on self-esteem, it is remains unclear if self-esteem influences sexual behavior in MSM. The quantitative studies of the literature review (Nicholson, et al., 1990; Perkins, et al., 1993; Siegel, et al., 1989) with the exception of Martin, et al., (1997), noted that self-esteem did not have an effect on sexual behavior in MSM. The qualitative studies (Robertson, et al., 1998; Seal, et al., 2000), however, reported that self-esteem did influence sexual behavior in MSM. With the discrepancies noted in this literature review on self-esteem, it is currently unclear if self-esteem affects sexual behavior in MSM.

Sexual Behaviors in MSM

In order to understand the sexual behaviors of MSM, a review of the literature on sexual behaviors of this population must be included. Of the variables included in this study, more literature is available that reports the sexual behaviors of MSM than self-esteem and depression. Consequently, since a large amount of literature exists on this variable, it is necessary to limit the studies that are included since it is impossible to review all research on sexual behaviors in MSM. Literature was limited to those studies on sexual behaviors of MSM that examined the relationship between sexual behaviors and other variables instead of merely reporting the results of descriptive studies on sexual

behaviors of MSM. The review and critique of the literature on this variable is presented in chronological order to follow the development of the research.

Research on the sexual behaviors in MSM was accelerated after the emergence of HIV infection. Once it was established that an infectious disease with fatal outcomes was transmitted sexually, and that the majority of those infected were MSM, research on the sexual behaviors of MSM proliferated (Catania, Chitwood, Gibson & Coates, 1990). In reviewing the large amount of literature on the sexual behaviors of MSM, this author wanted to include one of the earliest studies that focused on sexual behaviors in MSM. McKusick, Horstman and Coates (1985) surveyed 655 MSM in San Francisco, California in 1983. The sample consisted of 151 MSM who were recruited from public bathhouses, 134 who were recruited from bars that cater to MSM, 189 were recruited from advertising in the media and 181 were recruited from a previous study on relationships in MSM. Participants completed a 309 item questionnaire that included questions on health history, attitudes toward multiple sexual partners, HIV awareness, and knowledge of safer sexual practices. The questionnaire was developed by the researchers, and reliability and validity information, if available, was not reported, which of course, makes the findings suspect. For the purposes of the study, the men were grouped by their recruitment venue. Although exact statistics were not reported, demographics of the participants revealed that the majority of the participants were Caucasian with a mean age of approximately 32 years. The majority of the participants had some college education, and a significant percentage of the men reported illnesses such as lymphadenopathy, hepatitis, herpes, ameobiasis, and other sexually transmitted diseases that could be associated with HIV infection. In terms of sexual behavior, participants were asked to

report the number of times in over the present year versus the previous year that they went to bars or baths; the average number of sexual partners; number of sexual partners at public venues such as bookstores and parks; and number of sexual partners at bars. The results of the study were reported in the percentage of change from the present year as compared to the previous year. Only the bath house group did not show any change in bath house attendance or number of sexual partners over the period of one year. In terms of relationship status, men who were in a relationship did not change their sexual behaviors when compared to those who were not in relationships. Those MSM who were not in a relationship reported less high risk sexual behavior, but did not change their participation in low risk sexual behaviors. The researchers concluded that more research was needed on this topic to understand the effects that these factors and others have on high risk sexual behavior in MSM. Although this article has serious weaknesses such as use of descriptive statistics in the form of percentages to report findings, this study is important to include in this review of the literature since it is one of the earliest research studies on the sexual behaviors of MSM.

Peterson, Coates, Catania, Middleton, Hilliard, and Hearst (1992) researched high-risk sexual behavior and condom usage in African-American MSM. The demographics of this large sample (n=250) included 60% of the participants were between the ages of 30 and 39 (M=31; SD=5.4); 47% had an income between $10,000 and $30,000 per year; 50% had 13 to 16 years of education; 89 percent were single; 37% had engaged in prostitution; 25% engaged in drug use; and 65% reported that their sexual experiences over the past two years were exclusively homosexual. Participants completed questionnaires with measures of sexual behavior, drug use behavior, HIV

status, knowledge of HIV/AIDS, social support, and perceived risk of contracting HIV infection. All variables that were included in the questionnaire were generated by the authors, and did not have established reliability and validity. A large percentage of the participants (73 percent, *n*=183) reported that they participated in UAI over the past six months. Of these men, 38 percent (*n*=69) reported always using condoms during sexual intercourse; 39 percent (*n*=72) reported sometimes using condoms, and 23 percent (*n*=42) reported that they never used condoms during intercourse. Using multivariate analysis, the researchers examined the correlates of UAI over the past six months and the correlates of condom usage over the past six months. In terms of UAI, the researchers found that discomfort with sexuality (*OR*=1.15, *CI*=1.02-1.29; *p*=.02), perceived risk (*OR*=2.50, *CI*=1.46-4.26; *p*=.01), and social support (*OR*=0.51, *CI*=0.26-0.98; *p*=0.5) were correlated with participation in UAI. Condom usage was significantly correlated with the belief that condoms should used be used during sexual intercourse (*OR*=1.38, *CI*=1.15-1.65; *p*=.001), condom efficacy (*OR*=1.39, *CI*=1.18-1.64; *p*=.001), and expectations that condoms are always used during sexual intercourse (*OR*=1.18, *CI*=1.02-1.37; *p*=.02). The researchers concluded that the results of the study provided evidence that HIV risk reduction programs that are tailored to African-American MSM need to be developed and implemented. Although this study is important in that it focused on the sexual behaviors of African-American MSM, the results are suspect since the authors used research instruments without established reliability and validity.

Boulton, McLean, Fitzpatrick, and Hart (1995) conducted a qualitative research study to research the accounts of unsafe sexual behavior in MSM. The researchers interviewed 150 men with open interviews to explore unsafe sexual practices. Nearly

75% of the men reported participation in UAI in the past five years. Researchers reviewed 78 transcripts that were collected. The reasons provided by the participants for engaging in unsafe sexual behavior could be grouped into four themes: emotional needs and drives, the calculus of risk, issues of trust, and lapses in control. Emotional needs and drives were related to the physiological processes involved in the need to express love and intimacy with sexual expression. Calculating risks involves knowing the HIV status or estimated status of the sexual partner. If the participants knew or perceived that they knew the sexual partner, this influenced their decision to practice safer versus unsafe sex. Condoms and trust were related to primary or monogamous relationships. As trust increased, the frequency of condom use decreased. Lapses in control dealt with men who engaged in high risk activities because of actions of the self and partner and relationship issues. A major criticism of this study is that it did not identify which qualitative research methodology and data analysis techniques were used to analyze the data. Although the content of the article indicates that the article is phenomenological in nature, this is not specified in the article. A major concern regarding this article is the large number of participants who were surveyed for a qualitative research study. Usually qualitative research studies utilize a much smaller number of participants than is included in this study (Creswell, 1998).

Cochran, Leeuw, and Mays (1995) studied the sexual behaviors of Caucasian and African-American men using an anonymous sexual behaviors survey. The participants were drawn from attendees at an AIDS workshop in southern California and via a mail survey. Sample 1 was drawn from the workshop and consisted of 344 men who were 81% Caucasian, 5% Hispanic, 4% Asian, 2% African-American, and 8% other. Sample 1

included 15% (*n*=50) HIV-infected men. The average age of Sample 1 was 35.8 years (*SD*=10.2). Sample 1 participants reported no sexual partners in 29% of the men, only one sexual partner (41%), two sexual partners (13%), and 17% with more than two men with a range from three to 35 different sexual partners over the past 30 days. Sample 2 consisted of 811 African-American men who were recruited through a mail survey. In Sample 2, 80% (*n*=672) identified themselves a gay. The average age of Sample 2 was 33.4 years (*SD*=8.2) with an HIV infection rate of 14% (*n*=118). Participants in Sample 2 reported no sexual partners (21%), 38% reported only one sexual partner, 15% reported two sexual partners, and 26% reported more than two partners with a range from three to 31 partners over the last 30 days. Using the *a priori* classification for safer sex guidelines, differences were noted among the groups. The researchers noted that African-American men were more likely to engage in high risk sexual behavior than Caucasians [*chi*]2(5, *N*=1180)=37.19, p< .001). The researchers suggested developing interventions that address these high risk behaviors in African-American MSM.

Kelly, Sikkema, Winett, Solomon, Roffman, Roger, et. al. (1995) examined factors influencing high-risk sexual behavior in MSM in small US cities. Conducted in 1991 and 1992 in 16 cities with populations between 50,000 and 180,000, data was collected from 5,939 men. Participants completed demographic data, a sexual practices survey, a safer sex social norms survey, condom use intention, HIV testing history, and a personal risk assessment. Participants were mainly Caucasian (90%) with a mean age of 31.1 years (*SD*=8.7) with an average of 14.0 years (*SD*=1.8) of education. Of the participants, 1,943 were eliminated from data analysis because they were involved in a relationship. Data analysis was conducted on those who were not in a relationship

(*n*=3,996). Results of the *F* tests indicated that men who engaged in UAI reported that they were more at risk for HIV, had more sexual partners ([*eta*]=.324), had a higher self-estimation of risk ([*eta*]=.29), and were less likely to use condoms with the next sexual encounters ([*eta*]=.255) than those who engaged in safer sex. Using logistic regression, five variables were identified that were significant including men who participated in UAI having more sexual partners (*b*=2.13, *p*< .0001, *R*=.22), a higher risk estimation (*b*=.52, *p*< .0001, *R*=.14), lower intentions to utilize condoms during sexual intercourse (*b*=.46, *p*< .0001, *R*=.13), were younger in age (*b*= -.03, *p*< .0001, *R*= -.83), and to have less education (*b*= -.85, *p*< .0005, *R*= -.05). The researchers concluded that HIV prevention efforts are also needed in smaller cities and these efforts need to be tailored to men of younger age, with less education, and who have multiple sexual partners.

Julien, Chartrand, and Begin (1996) studied the safer sex practices among MSM within and outside of primary relationships. Eighty-two Caucasian French-speaking men from Quebec served as the participants in the study. The men were involved in relationships for an average of 4.99 years (*SD*=3.89). The participants' average age was 32.02 years (*SD*=8.33) with nearly three-fourths (69%) completing four years of college. Of the participants, four were HIV-infected, 32 were not HIV-infected, and 46 did not respond to this demographic item. The researchers reported that 63% of the participants engaged in sexual relationships outside of the primary relationship and that risk factors increased when one partner had sexual relationships outside the relationship (*F*(2, 38)=4.04, *p*< .05). The risks increased more when both partners had sexual relationships outside of the primary relationship (*F*(2, 38)=4.07, *p*< .05). Although this study provides insight to the sexual practices of MSM who are in a relationship versus those who are not

in a relationship, this study is limited in its generalizability in that it surveyed only Caucasian men and the participants in the study resided outside of the US.

Kelly and Kalichman (1998) studied the effect of reinforcement of a safer sex message on condom use in gay and bisexual men. The studied surveyed 383 sexually active MSM in Milwaukee, Wisconsin. Of these men, 26% were seropositive and were eliminated from the study, leaving a sample size of 297 seronegative men. Participants completed an AIDS knowledge survey, a sexual negotiation survey, a condom attitude survey, a condom use intention survey, and a perceived estimation of vulnerability to HIV. The mean age of the sample was 36.0 years (*SD*=11.2). Caucasians compromised the majority of the sample (n=195, 66%), with 21% African-Americans (*n*=58), 7% (*n*=19) Hispanic, and 7% (*n*=19) of other ethnic groups. The men had a mean age of 14.1 (*SD*=2.1) years of education and 90% (*n*=267) reported having multiple sexual partners over the past year. Of the participants, 26% (*n*=76) reported participating in receptive UAI, the highest risk activity. Condoms were used during anal intercourse an average of 52.5% (*SD*=43.6). Substance use was common with 52% reporting using alcohol, and 29% reporting marijuana, cocaine, or nitrite inhalant use during sexual intercourse over the past three months. Using hierarchical multiple regression, the researchers concluded that alcohol and drug use before sex did not predict condom use during anal intercourse (*R*=.19, *F*(2, 94)=1.83, *p*> .10), accounting for only 1.7% of the variance. Sexual negotiation did not influence condom usage (*R*=.27, *F*(3, 93)=2.50, *p*< .06). AIDS knowledge accounted for 2.3% of the variance and improved condom usage (*R*=.33, *F*(4, 92)=2.73, *p*< .05). Reinforcement of a safe sex message significantly added a total adjusted variance of 17.3% (*R*=.49, *F*(8, 88)=3.51, *p*< .01). Reinforcement of condom

use during receptive UAI was significant and accounted for 13.4% of the adjusted variance (R=.39, F(8, 255)=5.94, p< .01). The researchers concluded that reinforcement messages of safer sexual practices need to be included in interventions that target MSM.

Wolitski, Rietmeijer, Goldbaum, and Wilson (1998) investigated the HIV status disclosure of MSM in Dallas, Denver, Seattle and Long Beach. The participants consisted of 701 MSM who enrolled in this Centers for Disease Control and Prevention-sponsored study. The majority of the men were Caucasian (90.2%), with 5.6% Hispanic, 1.3% African-American and 2.9% other. Mean age was 33.6 (*SD* not reported) with the majority (79.5%) reporting only male sexual partners over the past year. During the study, participants were offered the opportunity to be tested for HIV, with 12.7% (n=87) testing HIV antibody positive. The researchers found that 96.7% of the participants discussed their HIV status with at least one person within six months of testing. The researchers also found that HIV infected men were more likely to be involved in a primary relationship than HIV-negative men, but this result was not statistically significant ([*chi*]2=3.32, df=1, p=0.07). No differences were found in protected anal sex between HIV-infected and HIV negative men ([*chi*]2=0.36, df=1, p> 0.05). The number of sexual partners and disclosure of HIV status was not statistically significant in either group ([*chi*]2=0.18, df=2, p>.05). The effect of serostatus disclosure on condom use during anal intercourse was also not significant ([*chi*]=1.10, df=1, p>.05).

Semple, Patterson, and Grant (2000) examined the sexual negotiation behavior of HIV-infected MSM. This study surveyed 256 HIV infected MSM who were enrolled in a risk reduction workshop for HIV-infected MSM. Participants completed surveys that asked about relationship status, frequency of negotiation behavior, frequency of

negotiation strategies, and sexual practices. Participants also completed the questions about self-efficacy, alcohol and drug use, loneliness using the UCLA Loneliness Scale, and depression using the Profile of Mood States: Depression/Dejection Subscale. Demographic data that was collected on the participants revealed that they were mostly Caucasian, never married, moderately well-educated, and had an average age of 37 (exact statistics were not reported by the researchers). About 25% of the participants were living with a partner. Results indicated that men who did not engage in anal intercourse were least likely to negotiate condom use with their partners ($F(2, 252)=13.2$, $p< .001$). Although men scored high on negotiation strategies with sexual partners ($F(2, 104)=3.9$, $p<.05$) and high with casual partners ($F(2, 156)=7.9$, $p< .001$), groups scored low on negotiation strategies with anonymous partners ($F(2, 112)$-1.3, $p> 0.5$), although this was not statistically significant. Although this author did not want to include samples with HIV-infected MSM in this review of the literature, this article was included since it demonstrates that sexual behaviors vary when MSM engage in sexual behaviors with primary partners, casual partners, and anonymous partners.

With emerging forms of technology available, communication between individuals has become easier. This technology has been utilized also to locate sexual partners, as researchers have documented the use of the internet to locate sexual partners. Bull, McFarlane and Rietmeigher (2001) conducted an internet survey of 1,380 MSM and 1,865 men who have sex with women (MSW). Only a few demographics were collected on the participants and the authors reported that the majority of those surveyed were Caucasian, between the ages of 26 and 40, and were “well educated,” although what the authors meant by this term was not clarified. Results revealed that 85.5% of MSM and

45.5% of MSW used the internet to locate sexual partners (*CI*=5.9-8.4, *p*< .01). More MSM (79.8%) engaged in sexual behaviors with the internet partner as compared to MSW (31.7%) (*CI*=7.2-10, *p*< .001). More MSM (39.7%) had anal intercourse with the internet partner greater than 50% of the time, as compared to MSW (11.2%) (*CI*=4.8-7.3, *p*< .001). More MSM (25.2%) informed the internet sexual partner of sexually transmitted diseases/infections (STD/STI) as compared to MSW (11.2%) (*CI*=2.2-3.2, *p*< .001). Concerning HIV infection, more MSM (5.5%) discussion their serostatus than MSW (0.4%) (*CI*=4.9-21.8, *p*< .001). Although the statistics were not reported, the researchers also noted that HIV status, STD/STI status, and race/ethnicity were not related to the use of the internet to locate sexual partners. The researchers noted that the internet should be utilized to develop HIV and STD/STI prevention interventions for internet users who utilize it to locate sexual partners. A weakness of this study is thatnmultiple regression statistical data on HIV, STD/STI status, and race/ethnicity was not reported. These statistics might be useful for researchers conducting a related study so that results could be compared to this study.

Mansergh, Colfax, Marks, Rader, Guzman, and Bunchbinder (2001) surveyed almost 300 (*n*=295) men from San Francisco who had attended a gay circuit dance party during the past year. Of the men surveyed, 78% were between the ages of 25 and 39. Seventy percent were Caucasian with 69% with a Bachelor's degree or higher. Seventeen percent reported that they were infected with HIV. Nearly all of the participants (95%) reported using non-prescription drugs during the circuit party. Participants reported almost half (49%) had engaged in active or receptive anal sex during the party with 28% reporting engaging in unprotected active or receptive anal

intercourse. Twenty percent of these men, however, reported that they engaged with unprotected sex only with partners of the same serostatus of the participants. The authors concluded that the high prevalence of drug use, high HIV infection rate of circuit party attendees, and the rates of unprotected anal intercourse are a public health concern. With the large number of Caucasians surveyed and the high educational level of the participants, the results of this study probably are not easily generalized to the MSM population.

Prestage, Van de Ven, Grulich, Kippax, McInness, and Hendy (2001) conducted a multimethod study in Australia that examined casual sexual encounters in MSM in terms of HIV status and condom usage. The study interviewed 300 men quantitatively and 20 men with qualitative techniques to support the quantitative data. The men had an average age of 38.7 years (*SD*=10.8), 35.7% had some university education, and 58% were employed in professional or managerial occupations. Almost 87% were Caucasian and 95% of the men self-identified as homosexual. The majority of the men (77%) were not HIV-infected, but 10% did not know their HIV status. Over half (57%) of those surveyed reported that their sexual habits included anonymous sex, where they were not familiar or acquainted with their sexual partners before engaging in sexual behaviors. Nearly 16% had inquired about the HIV status of their sexual partners during sexual encounters, although 45.1% reported that they had been asked by their sexual partners to engage in unprotected anal intercourse (UAI) in the past six months and 31.2% had honored this request ($p< 0.0001$). Forty percent of HIV-infected men did not use condoms during sexual intercourse, while only 9.8% of HIV-negative men did not use condoms ($p< 0.001$). HIV-negative men were less likely (16.1%) than HIV-infected men (33.3%) to

engage in UAI (p=0.035). Twenty-five percent of HIV-infected men engaged in UAI with men they reported that they knew were infected with HIV (p< 0.001). Although this study is useful in that it describes the unique nature of casual and anonymous sex in this population, this study may have limited usefulness since it was conducted outside the US, and with a largely Caucasian population.

Koblin, Chesney, Husnick, Bozeman, Celum, Bunchbinder, et. al., (2003) conducted a large six city study of HIV-negative MSM who had engaged in UAI in the past year. A large sample of 4,295 men participated in the study. Over 40% of the participants were less than 30 years of age. About 73% (n=3,112) were Caucasian, with 15% (n=652) Hispanic, and 6.5% (n=281) African-American. Over 35% (n=1,534) completed college. About 39% (n=1,656) reported incomes between $30,000 and $59,999 per year. Baseline date revealed that the majority of the participants (32.2%) reported between two and five sexual partner over the past year; 51% (n=2,172) were not involved in a relationship; 78% (n=3,354) reported more than one partner of unknown HIV status. Only 21.9% (n=927) reported having only safer sex, while 6.9% (n=292) reported unprotected receptive oral sex with ejaculation and unprotected receptive anal intercourse only. This is of concern, as receptive UAI carries the highest risk for HIV transmission. Although this study collected data from participants in Miami, Florida as one of the six study sites, minority MSM are underrepresented in this study. Although this study presents useful information and demonstrates that the majority of MSM in this study were not practicing safer sex behaviors, the focus on Caucasians as study participants could be considered a weakness.

Agronick, O'Donnell, Stueve, San Doval, Duran, and Vargo (2004) researched the sexual behaviors and risk for HIV infection among young Hispanic MSM. Using a large sample (n=421) of young men that was collected in New York City, the sample was composed of 21 percent bisexuals and 78 percent exclusively homosexual. Participants completed measures of sexual identification, sexual behaviors, national origin, and acculturation, relationship to the gay community, social support, and peer norms about condom usage. The reliability and validity of the measures was not reported, so it is assumed that the measures were generated by the researchers. *Chi*-square analyses were used to compare the bisexual and gay participants in terms of demographics, sexual characteristics, and sexual behaviors. In terms of demographics, the two groups differed only in terms of education with bisexual men having less education than gay men (x^2=22.57, p< .001). In terms of sexual characteristics, bisexual males were more likely to have more sexual partners (x^2=11.63, p< .01), were less likely to have a steady male sexual partner (x^2=10.23, p< .01), and were more likely to have female sexual partners (x^2=143.28, p< .001). In terms of high risk sexual behaviors, bisexual men were more likely than gay men to participate in insertive anal intercourse (x^2=4.08, p< .05), receptive anal intercourse (x^2=12.11, p< .05), and to use drugs and alcohol during sexual intercourse (x^2=6.36, p< .05). Using odds ratios for logistic regressions, the researchers noted that with non-primary male partners, bisexual men were more likely than gay men to participate in insertive anal intercourse (*OR*=1.93, *CI*=1.15-3.23; p=.01), unprotected insertive anal intercourse (*OR*=3.45, *CI*=1.03-11.53, p=.04), receptive anal intercourse (*OR*=0.26, *CI*=0.13-0.49; p=.00), and to be intoxicated with drugs or alcohol (*OR*=2.36, *CI*=1.33-4.19; p=.00) than gay men. The researchers concluded that more interventions

for Hispanic bisexual men need to be developed since this group is more at risk for acquisition of HIV infection than other ethnic groups of MSM based on the results of this study. This study is important to include in this literature review since it is one of the only studies that emphasizes the need to conduct more research on bisexual men and to develop interventions for HIV prevention strategies for bisexual men that are different than those that are targeted toward gay men.

Summary of Sexual Behaviors in MSM

Of the variables included in the literature review of Chapter Two, more research studies were available that reported the sexual behaviors of MSM than any other variable. This extensive knowledge base on MSM also allows one to see the progression of the research from early studies conducting at the beginning of the epidemic to present day. This not only shows how the knowledge base has advanced since the early studies, but demonstrates how the studies have advanced from descriptive studies to studies that employ more advanced statistics to study this variable.

From this literature review, strengths of the literature review are evident. The studies on sexual behaviors in MSM tended to have larger samples than studies reviewed on depression and self-esteem. Larger samples allow the reader to have more confidence in the results of the studies since there is less risk of sampling error (Salkind, 2000). Another strength that is noted from the literature review is the progression of the studies. As noted earlier, the studies on this topic began as simple descriptive studies that described what type of sexual behaviors MSM had participated. After the behaviors were adequately described in the literature, researchers could begin to examine the effects of

different variables on the sexual behavior and to test interventions that affected sexual behavior in MSM.

A few weaknesses are evident, however, from this review of the literature. First, the majority of the studies that could be located on the sexual behaviors of MSM use samples that are mostly comprised of Caucasians. Second, the studies that were included in this review of the literature measured sexual behaviors with tools without reliability and validity. Using research instruments without established reliability and validity do not allow the research to know for certain if the variables were adequately measured. Reliability and validity are the researcher's first line of defense against incorrect conclusions about the research results. The use of instruments without established reliability and validity could cause the researcher to accept a hypothesis that is not correct or to reject a hypothesis that is correct. In order to ensure that hypotheses are interpreted correctly, instruments with sound reliability and validity should be utilized (Salkind, 2000).

Lastly, in this literature review, there was no consistent measure of sexual behavior across studies. The majority of the studies simply measured the number of sexual behaviors such as participation in oral sex, anal sex, etc., without the use of a research instrument to measure these sexual behaviors. Since it is know that there are research instruments that measure condom usage, condom knowledge, and condom attitudes, as well as instruments that measure actual sexual behaviors (Catania, et. al., 1990), it is unclear as to why the researchers chose to use these instruments that have not been subjected to psychometric testing.

Summary of Chapter II

From the literature reviewed on depressive symptoms, self-esteem, and sexual behaviors of MSM, evidence exists to document that MSM may experience depressive symptoms and alterations in self-esteem that may influence sexual behaviors. Although there are some weaknesses and gaps in the existing literature, this dissertation research study will attempt to both add to the knowledge base and to fill some existing gaps. This was accomplished by recruiting a sample that is composed of a larger percentage of ethnic minority men, by using a research instrument to measure sexual behavior with established reliability and validity, and by utilizing research instruments that have been shown to accurately measure depressive symptoms and self-esteem. Lastly, this study goes one step further and attempts to examine some of the variables that could influence sexual behaviors in this population.

CHAPTER III: METHODS

This chapter will discuss all aspects of the research methods employed to conduct this study. The study's research approach, assumptions of the research approach, design, participant selection, instruments, data collection and recording techniques, data analysis, and limitations of the study will be discussed in detail.

Research Design

A non-experimental research approach was employed as this study's methodological approach. Non-experimental research is the research approach most frequently used in nursing research (Polit, 1996).

There are two types of non-experimental research approaches: descriptive research and *ex post facto* or correlational research. Descriptive research is used when the researcher wants to observe and describe research phenomena without examining relationships between variables nor explaining or predicting the variables under investigation. When the researcher desires to determine the relationships among variables, then correlational research is the approach that must be utilized (Creswell, 2002).

Correlational research is used when the researcher wants to know the relationships among variables as they naturally occur, without manipulation or control by the researcher. The researcher wants to note the effect of the dependent variable or variables on the independent variable after the effect has occurred (Creswell, 2002).

Correlational, or *ex post facto*, research has strengths and weaknesses. In terms of strengths, this research approach is useful in that it is realistic and useful for many nursing research studies that are not amenable to experimental research approaches. This

research approach has been useful in testing hypotheses that are derived from a theoretical model, as the direction of causation among the model's concepts can be researched. Lastly, correlational research has been used successfully in collecting and analyzing large amounts of research data in an efficient and effective method (Creswell, 2002).

Despite the approach's strengths, correlational research has weaknesses that must be considered. Three major weaknesses can be identified. First, since the researcher can not manipulate the independent variable, true control over the research study can not occur. Second, since random assignment of participants in this approach does not occur, the researcher must rely on those who agree to participate in the study as the study's only group of participants. This group of participants may have pre-existing differences that may affect the study's results. Without having two groups, comparisons between the groups can not be made, and it must be assumed that members of this group are similar to each other. Third, many correlational studies are at risk for inaccurate interpretation of the study's results. The results of many correlational studies are often considered tentative because of the lack of theoretical basis in these studies. If the relationships examined are not based on a theoretical model, incorrect interpretation of the relationships of variables could occur (Creswell, 2002). This is not the case in this study, as the Vulnerable Populations Model (Flaskerud & Winslow, 1998) provides a solid theoretical model for this study.

This research study employed a causal comparative approach. Causal comparative correlational approaches are used prospectively to compare two or more groups on one or more variables to determine if there is a relationship (Powers & Knapp,

1995). In this study, the study variables of depressive symptoms, self-esteem, and sexual behaviors of MSM of different ethic backgrounds that were compared to see if there are differences among these groups.

Drawing from correlational research design, the study's variables can be identified. In addition, null hypotheses for the research hypotheses that were identified in Chapter One can also be identified.

Independent or Predictor Variables

Independent variables are the variables that are known, predictive, or perhaps causative of the dependent variable. In simplest terms, the independent variables are a potential cause of the dependent variable. In non-experimental research, the independent variables are measured and correlated with the dependent variable (Powers & Knapp, 1995). In this study, the independent variables are depressive symptoms and self-esteem.

Dependent or Outcome Variable

The dependent variable is the variable in the study that is the principal interest of the researcher. The dependent variable is variable that is influenced by the independent variables, and it is the independent variables' influence on the dependent variable that is of interest to the researcher (Powers & Knapp, 1995). The dependent variable in this study is sexual behaviors.

Attribute Variables

Attribute, or demographic, variables are also included in this study. Attribute variables are pre-existing characteristics used to describe the sample of the study. Attribute variables include categorical variables such as race/ethnicity, educational level, and income (Creswell, 2002). Attribute variables that will be included in this study

include age, years of education, employment status, source of income, annual earnings, relationship status, and country of origin.

Setting

The setting of a research study is the physical location and the circumstances in which data collection occurs (Creswell, 2002). This research study employed various settings in order to collect data. This study drew its participants from the population of MSM who reside in South Florida. For the purposes of this study, South Florida will include Broward and Miami-Dade County.

Broward County, Florida has a total area of 1,179 square miles. The county has a population of 1.7 million. The county's population consists of 20.5% African-Americans/Blacks, 58% Caucasians, and 17% Hispanics. A little over one-quarter, or 25.3%, of the county's population is foreign-born, and 28.8% of the households in the county speak a language other than English. Almost one-quarter (24.5%) have a Bachelor's degree. The population's average income is $41,691 with 11.5% of the population below the federal poverty level (United States Census Bureau, 2000).

Miami-Dade County is one of the most southern counties in the State of Florida. Miami-Dade County has as area of 1,946 square miles. The county has a population of 2.3 million. The population of the county consists of 20.3% African-Americans/Blacks, 20.7% Caucasians, and 57.3% Hispanics. The majority of the county's population (50.9%) is foreign-born. Of the households in the county, 67.9% speak a language other than English. The majority of the county's citizens (67.9%) have a high school diploma with 21.7% with a bachelor's degree or higher. The population's average income is

$35,966 with 18% of the population below the federal poverty level (United States Census Bureau, 2000).

Since MSM who reside in the county do not reside in one specific area of the county, it is necessary for this researcher to survey these men in physical locations in which they congregate. Since various restaurants, clubs, bars, and organizations are frequented by MSM, this researcher utilized these physical locations to sample this population. After this study was approved by the Institutional Review Board (IRB) of Barry University, this researcher approached the owners of these establishments who cater to this population to obtain the owners' consents to sample MSM at their establishments. Establishments that served as study sites are included in Table 1.

Table 1: Data Collection Sites in South Florida

Site	Description of the Site	Site Location	Frequency and Percent
Snowball sampling	Various locations in Miami, FL	Miami, Florida	66 (32.1%)
Score Bar	Bar/social club	South Miami Beach, Florida	52 (25.4%)
Parties/social events	Various locations in Miami, FL	Miami , Florida	32 (15.6%)
Clinics	Two research clinics that provide healthcare to MSM	Miami, Florida and Miami Shores, FL	26 (12.7%)
Georgie's Alibi	Bar/social club	Wilton Manors, Florida	9 (4.4%)
Unity on the Bay	Church/place of worship	Miami, FL	4 (2.0%)
Surveys distributed at above sites, but returned by mail	Various locations in Miami, FL	South Miami, Florida	16 (7.8%)
			205 (100%)

Selection of Participants

The selection of participants is important in any research study to ensure that the researcher surveys members of the population to accurately represent the population. Since it is not feasible to sample the entire population of MSM who reside in South Florida, this researcher surveyed a certain number of MSM from this population that will serve as the study's sample. The sample is a representative subset of the population (Hulley, Newman, & Cummings, 2001).

In order to draw a sample from this population, the non-probability sampling technique of convenience sampling was employed. Although this sampling technique is considered one of the weakest sampling methods, it is one of the most common sampling strategies used in nursing research studies (Burns & Grove, 2001). Convenience sampling is considered weak since it is not random. Using this method does not ensure that the researcher will sample members of the population who are truly representative of the larger population (Creswell, 2002). Despite this weakness, convenience sampling is useful in studies such as this proposed study where members of the population can be sampled by the researcher. Convenience sampling is also less expensive and less time consuming for the researcher than other sampling techniques (Salkind, 2000).

In order to calculate sample size, the study's power, effect size, and significance level must be selected by the researcher. Power is the chance of rejecting the null hypothesis and thereby avoiding a Type II error. Since a power of 80% or .80 is generally considered acceptable for research studies (Munro, 2001), this researcher selected .80 as the power for this study.

After power was established, effect size was considered. Effect size is a proposed measure of the strength, or effect, of the alternative or research hypothesis (Powers & Knapp, 1995). Since this researcher was not certain of the association of the variables under investigation, the researcher can set the effect size as an estimate (Cohen, 1987). Since this study used multiple regression as its most powerful statistical test, effect size for multiple regression must be employed, therefore, a medium effect size of .35 was chosen as the study's effect size (Polit, 1996).

Lastly, significance level was established. The significance level, or *alpha*, is the probability of rejecting a true null hypothesis and committing a Type I error. In most research studies, the *alpha* is set at 0.05. With an *alpha*, or *p* value, of 0.05, the researcher has only a five percent chance of committing a Type I error (Munro, 2001), therefore, this *alpha* level of 0.05 was selected for this research study.

With these levels selected by the researcher, a statistical program to calculate sample size was used. Entering the following values into the *G*power* statistical program (effect size=0.35; *alpha*=0.05; Power=0.95), a sample size of 178 was required (*Lambda*=26.7000; Critical *F*=(11, 166)=1.8467) (Buchner, Erdfelder, & Faul, 1997).

As discussed in Chapter One, this researcher intended to collect a sample for this study that reflects the ethnic/racial composition of Miami-Dade County, requiring 37 African-Americans, 37 Caucasians, and 104 Hispanics to participate in the study. As a certain number of each ethnic group was projected to complete this study, this study employed quota sampling. Quota sampling in this study involved sampling the population of MSM at the selected sites until the required numbers, or quotas, were filled (Powers & Knapp, 1995). Since it was not possible to include the minimum number of

each ethnic group as projected, the researcher sampled the population until at least a minimum sample size of 178 was reached, regardless of the ethnic composition of the participants.

Inclusion and Exclusion Criteria

In order to determine the traits of the participants that this researcher wanted to survey, the researcher determined inclusion and exclusion criteria before participant recruitment commenced. The purpose of inclusion criteria is to define the characteristics of the sample, while exclusion criteria are necessary to decide which characteristics of participants are not desirable (Hulley, et. al., 2001).

Inclusion criteria

Inclusion criteria not only define the characteristics of the sample, but it identifies a sample that can be surveyed to find an answers to the research questions. Inclusion criteria usually include demographic, clinical, geographic, and temporal characteristics (Hulley, et. al., 2001). For the purposes of this research study inclusion criteria included:

1) Participants were a minimum of 18 years of age.

2) Participants resided in Metropolitan South Florida.

3) Participants were required to be able to read and comprehend English or Spanish.

4) Participants were required to self-identify as a man who has sex with men, regardless of marital status.

5) Participants were required to self-identify their ethnicity.

Exclusion Criteria

Exclusion criteria are used to note characteristics of the population that are not desired by the researcher and that can be used to limit participation in the study. Exclusion criteria may be used when participants are likely to become lost to follow-up, are unable to provide reliable data, or when participants have medical conditions that may limit participation (Hulley, et. al, 2001). For the purposes of this study, exclusion criteria included:

1) Participants who were less than 18 years of age.
2) Participants who did not reside in Metropolitan South Florida.
3) Participants who could not read or comprehend English or Spanish.
4) Participants who were unwilling to self-identify as a man who has sex with men.
5) Participants who refused to self-report their ethnicity.
6) Participants who exhibited signs and symptoms of alcohol intoxication such as slurred speech, flushed face, apparent odor of alcohol on the breath, and changes such as a slowing of motor functioning (Seidel, Ball, Dains, & Benedict, 1995).

Instrumentation

Three instruments were used to measure the variables in this study. The three variables of depressive symptoms, self-esteem, and sexual behaviors each were measured by research instruments that have been tested to measure these variables. In addition to these three variables, a demographic questionnaire was included with the instruments. In order to make this survey professional and to recruit participants, the research

instruments and the demographic questionnaire was collated into a booklet that was entitled the “Urban Men’s Health Study.”

Center for Epidemiological Studies-Depressed Mood Scale (CES-D)

The variable of depressive symptoms was measured using the Center for Epidemiological Studies-Depressed Mood Scale (CES-D). The CES-D was designed by Radloff (1977) to measure signs and symptoms of depression in the general population for research purposes. Although initially designed for use in research, this instrument has been shown to be useful in the clinical setting.

Description of the CES-D

This instrument is a 20-item instrument that measures depression. The portion of depression that is specifically measured most effectively with the CES-D is the affective, or mood, component. Items included in the CES-D were developed from items that were included on other depression scales, from research literature on depression, and from factor analysis studies conducted by Radloff (1977). Because of its strong foundation in research, its ease of use, and its broad applications, this instrument has been used to measure depression in a large number of research studies where depression is a variable under investigation. It is estimated that five minutes is required to complete the CES-D, with an additional one to two minutes required for scoring. The CES-D is in the public domain and does not require permission for use.

Norms for the CES-D

The CES-D was normed with a large number (n=3,574) of male and female Caucasians. From this large sample, 1,422 participated in test-retest procedures used

during instrument development. Means for this large sample of Caucasians ranged from 7.94 to 9.25.

In addition to this large sample in the general population, 70 male and female psychiatric patients also completed to survey during instrument development. The ethnic composition of the psychiatric patients was not reported. The mean for the psychiatric population was 24.42.

Scoring of the CES-D

The CES-D is scored by summing the 20 items to obtain a total score. The instrument includes 16 positively-worded statements and four statements that need to be reverse-scored (items 4, 8, 12, and 16). This instrument is a Likert-scale tool with scores ranging from 0 (*rarely or none of the time or less than 1 day)* to 3 (*most or all of the time or 5 to 7 days*). Total scores on the CES-D range from 0 to 60. When the CES-D was designed, no "cut off" scores were reported, except that higher scores indicate higher levels of depression. The researcher administering the instrument is free to determine the score that will be used to indicate depressive symptoms. In most studies, scores above 16 are indicative of depression. Since this study's goal is not to diagnose depression, a "cut off" point for the score is not necessary, although in this study a score greater than 16 is indicative of more depressive symptoms.

Reliability Data on the CES-D

Reliability coefficients reported on the CES-D report that the instrument has high internal consistency with an *alpha* of .85 noted for the general population. An *alpha* of .90 was noted for the psychiatric sample. In addition, the *alpha* coefficients, split-half and Spearman-Brown reliability coefficients of .77 to .92 have been noted with both

populations. Test-retest correlations range from .51 to .67 when participants were retested over a 2- to 8-week period, and .32 and .54 when retested over a 3-month to 1-year period (Radloff, 1977). The test-retest correlations on the two to eight week period demonstrate that the instrument has moderate to strong internal consistency, while the three month to one year data indicate weak to moderate internal consistency (Salkind, 2000b).

Validity Data on the CES-D

The CES-D is reported to have excellent concurrent validity. This concurrent validity was established by correlating the CES-D with other depression and/or mood scales. This validity is also evident in the fact that the instrument can be utilized to discriminate between the general population and the population who has alterations in mood states such as depression. The CES-D, with its reported high validity, has been shown to be sensitive to screen members of the population for depression, and can help identify those of the population who may require professional intervention (Radloff, 1977). Validity of the CES-D was confirmed by Irwin, Artin, and Oxman (1999) with the elderly population and the CES-D was correlated significantly with the Beck's Depression Inventory (BDI), an established measure of depression, with an adolescent population (Wilcox, Prodromidis, & Scafidi, 1998). (Appendix B includes a copy of the CES-D).

Spanish Version of the CES-D

Although it has been reported that the CES-D has been translated into Spanish, this instrument is not readily available in the public domain. A process was employed to ensure that the research instruments are available in Spanish for the majority of the

study's participants. Various techniques are available to translate instruments from English into another language for use in research. These include forward translation, forward translation with testing, back-translation, back-translation with monolingual testing, back-translation with bilingual translation, and back-translation with both monolingual and bilingual translation (Maneesriwongul & Dixon, 2004).

Since this study required Spanish translations of the research instruments, the process of back-translation as described by Marin and Marin (1991) was utilized. Noting that over one-quarter of Hispanics who are bilingual prefer to respond to questionnaires in Spanish, Marin and Marin (1991) stressed the importance of back-translation. In this process, the instruments are translated from Spanish to English by a bilingual translator. The translated instruments are then given to a second bilingual translator who would translate the instrument from Spanish to English. The researcher would compare the back-translated Spanish to English instrument to the original English instrument. Discrepancies in translation are then resolved by the researcher consulting both translators until agreement is reached on the Spanish version of the translation (Marin & Marin, 1991).

This researcher, therefore, began this process by having the instrument translated into Spanish by a Cuban-American translator who is fluent in Spanish and who has a Master's degree in teaching English as a foreign language. After this instrument was translated into Spanish, it was given to two other persons who are fluent in English and Spanish. These persons were from Spanish-speaking countries other than Cuba. This researcher asked these bilingual persons to provide written translations of this instrument from Spanish back to the original English. The translations of the various Spanish-

speaking translators were compared for inter-rater reliability by the researcher. No discrepancies existed between the three translations of the instruments. If discrepancies would have existed, the researcher would have asked all translators to meet in a group session to resolve the discrepancies in translation.

Rosenberg Self-Esteem Scale (RSE)

The second variable under investigation in this study is self-esteem. Self-esteem was measured by the Rosenberg Self-Esteem Scale (RSE). The RSE is probably the most-widely used measure of self-esteem in the research literature. The RSE is reported to be a measure of global self-esteem. The RSE is used for research purposes only and does not have any clinical uses.

Description of the RSE

The RSE is a 10-item scale that provides the researcher with a measure of self-esteem. Because of its wide usage and acceptance, the RSE is the most respected measure of self-esteem that is currently available. Rosenberg (1979) notes that self-esteem is only a portion of self-concept that includes self-esteem, self-efficacy, and self-identity. Administration time for the RSE is estimated to be five minutes, with an additional five minutes required for scoring. Since the RSE is in the public domain, it does not require permission for use. The Rosenberg estate would like to be kept informed of its usage in research. A letter detailing the use of the RSE in this study is included in Appendix B.

Norms for the RSE

The RSE was normed with a large number (n=5,024) high school juniors and seniors collected from 10 schools in the state of New York in the 1960's. Although the

RSE was developed for use with adolescents, further research by Rosenberg (1989) noted that the instrument could be used with college-age students and adults.

Scoring of the RSE

The RSE is scored by summing the 10 items to obtain a total score. This instrument contains five items that are positively scored (items 1, 2, 4, 6 and 7), and five items that are reverse-scored (items 3, 5, 8, 9, and 10). This instrument is a Likert scale tool with scales that range from 0 (*agree)* to 3 (*strongly disagree)*. Scores on the RSE range from 0 to 30. When the RSE was developed, no "cut off" scores were noted. Rosenberg (1989) reported that higher scores indicate higher levels of self-esteem.

Reliability Data on the RSE

Reliability coefficients reported on the RSE show that the instrument has high internal consistency with an *alpha* ranging from .77 to .88. Test-retest correlations were reported to be .82 to .88 over a 2-week period (Rosenberg, 1979). Of interest to note for the purposes of this study, Savin-Williams (1990) reported that the RSE possessed test-retest reliability coefficients of .88 over a 3-month period when used on gay male and female youth. The coefficients reported by both Rosenberg (1979) and Savin-Williams (1990) indicate that the RSE has very strong internal consistency (Salkind, 2000b).

Validity Data on the RSE

Rosenberg (1989) reported that the RSE demonstrates concurrent, known-groups, predictive, and construct validity. This was accomplished by correlating the RSE with the Coopersmith Self-Esteem Inventory, a widely-used measure of self-esteem. Rosenberg (1989) also noted that the RSE is correlated with measures of depression, anxiety, and peer-group relationships.

Spanish Version of the RSE

Like the CES-D, the RSE has been translated into Spanish, but this instrument is not readily available in Spanish. The RSE will be translated into Spanish. The same translation process used by this researcher for the CES-D will be used for this instrument. Appendix C contains a copy of the RSE.

Safe Sex Behavior Questionnaire (SSBQ)

The third variable under investigation is sexual behaviors. For the purposes of this study, sexual behaviors were measured using the Safe Sex Behavior Questionnaire (SSBQ).

Description of the SSBQ

The SSBQ is a 27-item measure of sexual behavior that asks questions regarding barriers used during intercourse, participation in high-risk sexual behaviors, exchange of body fluids during sexual activities, and communication skills to negotiate safer sex behavior before sexual intercourse. Administration and scoring time for the SSBQ has not been reported. The SSBQ is an instrument that is not in the public domain. Permission for use has been received via an electronic mail from one of the instrument's authors (Appendix C).

Norms for the SSBQ

The SSBQ was normed on a relatively small sample of 89 college-aged students. During instrumentation, 179 students completed the instrument, but only 89 of these students reported engaging in sexual activity. Only these 89 questionnaires of sexually-active students were included in the data analysis. The participants ranged in age from 18

to 20 years (*M*=18.2). Of the sample, 52 percent were male, 94 percent were Caucasian, 99 percent were single, and 92 percent were heterosexual.

Scoring of the SSBQ

The SSBQ is scored by summing the 27 items. All items are positively scored except items 2, 7, 9, 15, 17, 18, 23, 25, 26, and 27. These items are reverse scored. Higher scores indicate participation in safer sex behaviors.

Reliability Data on the SSBQ

Reliability coefficients reported on the SSBQ showed that the instrument has relatively high reliability with a reported *alpha* of .82. Test-retest reliability over a 2-week period ranged from .52 to .84 in males, and .52 to .82 for females.

Factor analysis was conducted using another sample of 531 sexually-active males and females. From this sample, 330 (62 percent) were males, 70 percent (*n*=372) were African-American, 94.5 percent were single, and 97 percent were heterosexual. The males ranged in age from 18 to 23 (*M*=18.5), while the females also ranged in age from 18 to 23 (*M*=18.3). Using maximum likelihood common factor analysis followed by direct oblimin, factors were based on a factor loading of at least .30. From this factor analysis, three items were omitted because of the fact that they failed to meet criteria for retention, resulting in a 24-item scale if these three items (items 6, 7 and 16) are deleted. These items included the use of spermicides, use of rubber gloves during foreplay, and avoidance of sexual intercourse with intravenous drug users (DiIorio, et. al., 1992). Since these three items may or may not really apply to the population of MSM, they will be included on the survey, and will be used in data analysis.

Validity Data of the SSBQ

The SSBQ was validated by comparing it to other research instruments. Since the authors of the SSBQ believed that safer sex behaviors are related to risk-taking and assertiveness, the SSBQ was compared to the College Self-Expression Scale (CSES), which measure assertiveness, and the Risk-Taking Questionnaire (RTQ) that measures risk-taking behaviors. Correlation coefficients were computed separately for males and females, with *alphas* ranging from -.34 to .39 for males, and -.21 and .27 respectively for females (DiIorio, Parsons, Lehr, Adame & Carlone, 1992). Although the authors of the SSBQ report that this instrument is correlated with the CSES and the RTQ, the correlations reported are weak correlations. These weak correlations indicate a weak relationship between these instruments (Salkind, 2000b).

Spanish Version of the SSBQ

A Spanish version of the SSBQ was not available. As discussed with the CES-D and the RSE, the SSBQ was translated into Spanish and was tested with members of the Spanish-speaking population in this study. A copy of the SSBQ and the instrument author's permission to use the SSBQ can be found in Appendix D.

Demographic Questionnaire

Demographic questions are included in this research study so that a description of the participants can be known. Since these are attribute variables, reliability and validity data were not be available and are not necessary.

These demographic questions were also be translated into Spanish in the same manner as the CES-D, the RSE, and the SSBQ. Appendix E contains a copy of the

demographic questionnaire.

Field Procedures

In order to develop a plan for conducting the data collection phase of this study, it was necessary for this researcher to develop a research protocol that details how participants are recruited and sampled. A research protocol is the overall outline or plan for procedures that for data collection that occur at the study site (Powers & Knapp, 1995). The following research protocol was developed and followed:

1) After the study received Institutional Review Board (IRB) approval, the researcher developed a poster/flyer that describes the study. The poster included a contact number that interested participants could call for more information about the study. Appendix E contains a copy of poster/flyer.
2) The researcher made contact with owners of establishments that cater to MSM to obtain permission to use that establishment as a data collection site. The researcher asked the owner of the establishment to provide verbal permission to use the site for data collection. A list of sites used in data collection is detailed in Table 1.
3) After verbal permission was obtained by the owners of the establishment, data collection times and dates were negotiated with the owner or manager of the establishment.
4) On the specified dates and times, the researcher and research assistants set up a table in a reasonably private, secluded area of the establishment to serve as a place where participants completed the survey. The researcher had booklets entitled the "*Urban Men's Health Study*" that included the research

instruments and the demographic questionnaire. Equal numbers of the booklet were available in English and Spanish.

5) The researcher and a research assistants approached participants in an attempt to recruit participants to complete the survey. MSM who are physically present at the data collection site were approached by the researcher and research assistant and invited to participate in the study. If the participant did not agree to participate in the study, he was thanked by the researcher for his consideration of participation.

6) When the participant agreed to participate, the participant was given a a letter that described the study in both English and Spanish, a choice of an English or Spanish questionnaire, a pen, and clipboard to complete the study. Since this study asked the participant to provide answers to very sensitive data, a written and signed consent was not obtained, as completion of the survey signified consent to participate in the study. Participants were given the option of taking the survey with them to complete at a future time. If participants elected this option, a self-addressed, stamped envelope with the researcher's address was provided for the participant.

7) The participant was provided as much privacy as the study site afforded to complete the survey. The researcher was available onsite in the event that the participant had questions about the survey.

8) After the participant completed the survey, the researcher asked the participant to place the survey in a sealed envelope that was provided to

the participant.

9) The completed survey was placed by the researcher into a locked box. Only the researcher had access to the contents of this box. Completed surveys remained in this box until data entry began.

10) The participant was thanked for participation and was provided with an envelope that contained a small monetary compensation of two dollars for study participation. Participants were asked to refer friends, partners, and acquaintances to the researcher so that they could participate in the study.

11) Data collection continued at the research sites until the appropriate number of MSM were surveyed as previously discussed.

Data Collection and Recording

Data were collected via structured instruments in a self-administered questionnaire as previously discussed. Self-administered questionnaires are one of the most effective means of increasing the return rate of questionnaires. Since the researcher was on-site during the data collection process, participants were afforded the opportunity to seek clarification about items that are included on the survey that the participant did not understand. As a data collection method, self-administered questionnaires are very efficient and relatively inexpensive (Creswell, 2002).

These research instruments are composed of fixed-alternative questions that ask participants to choose among the choice provided. Fixed-alternative questions are more efficient for data collection since they allow the participant to complete the items quickly since the participant is not required to compose or generate a response (Creswell, 2002).

Some of the demographic questions, however, required participants to answer open-ended questions. This type of question required the participant to provide an answer to an item. Open-ended questions may require more time to complete since responses are required, but these items provide more in-depth information that cannot be found with fixed-alternative questions (Creswell, 2002). Participants were allowed as much time as needed to complete this survey. Each survey was completed in less than 30 minutes.

After all research data were collected and the desired number of participants was surveyed, data analysis began. Before data analysis began, however, the surveys were checked for completeness. Questionnaires with more than 30 percent missing data were excluded from data analysis (Munro, 2001). Each completed questionnaire that was included in data analysis was assigned a number for data entry. This number was important to identify to that particular survey in case the research or dissertation committee needs to refer to that questionnaire in the future.

The data were recorded using the latest version of *Statistical Package for Social Sciences* (*SPSS* 12.0). *SSPS* is a computerized program for quantitative data entry and data analysis. A database for this study was created that included a unique identification number for each completed survey. In addition, scores on the CES-D, scores on the RSE, scores on the SSBQ, and each demographic variable have its own variable space in the program. The CES-D, RSE, and the SSBQ were entered in the values that each item generated as discussed in the scoring session of each instrument. The demographic variables, however, were assigned a descriptor in the form of a number. For example, under the variable of employment status, “unemployed” was coded with the descriptor of 0, while “employed full time” has a descriptor or 1, etc. These descriptors allowed the

data to be easily coded and entered into *SPSS* (Green, Salkind, & Akey, 2000).

Protection of Human Subjects

In order to ensure that the study follows ethical and moral principles concerning research, this study was required to follow certain guidelines to ensure that the protection of participants. This protection of participants was interwoven throughout the research process.

Before data collection commenced, this study was approved by this researcher's dissertation committee at the Barry University School of Nursing on April 26, 2005. After this approval was obtained, the study was presented and approved by the Barry University Institutional Review Board (IRB). Once IRB approval was obtained, data collection began on July 1, 2005 and finished on November 30, 2005.

As mentioned previously, protection of participants throughout the research process is essential. The protection of participants began with the recruitment process. In order to recruit participants, advertising directed at participants included information for potential participants. Advertisement for this study included a flyer with certain information that was displayed in institutions or establishments that cater to MSM. This information included the name and telephone number of this researcher, the purpose of the research, inclusion criteria, incentive for participation, and the time commitment required for participants (Scott-Jones, 2000). This advertisement flyer was submitted to the Barry University IRB as part of the IRB application package. A copy of this flyer can be located in Appendix F.

Once recruitment issues were considered, informed consent issues were then considered. Since this research study deals with very sensitive information, a signed

consent for participation was not obtained from the participants. Participants were provided with a letter that detailed the study and informed participants that by completing the survey, the participant has given consent to participate in the study. The letter provides the same information as the recruitment flyer, but also provides in more detail the risks, discomforts, benefits, assurance of confidentiality, and contact numbers for the researcher (Fischman, 2000). Of course, IRB approval was obtained that allowed this researcher to forego a formal signed consent for participants. Appendix G contains a copy of the letter to participants that explains the purposes of the study. Appendix H contains a copy of the IRB approval for this study.

When planning the study, the issue of compensation for participants was also considered. Researchers must be careful with offering inducements or incentives for participation so not to make participants feel coerced into participating, or to exploit members of a vulnerable population. On the other hand, inducements in an indirect manner compensate participants for their time spent completing the study (Scott-Jones, 2000). After participation in the study, participants were provided with two "scratch off" Florida lottery tickets with a value of two dollars. Florida lottery tickets were chosen by this researcher since they are a small, inexpensive, and a fun inducement for participation.

Throughout the research process, anonymity of participants was a priority. The privacy and confidentiality of this study's participants is necessary not only because of the sensitive nature of the information collected, but the sexuality issues of the participants must be considered. Since it is not known how open or comfortable

participants are with their sexual orientation, protecting their privacy and confidentiality is important.

During the data collection process, measures were taken to protect the privacy of the participants. This was difficult, however, since the data was collected in the field, but this researcher attempted to provide as much privacy as possible in this limited environment for participants. Providing clipboards and attempting to provide a quiet, private place within the confines of the environment to complete the survey were also assured by this researcher.

As discussed earlier, since signed informed consent was not obtained, it should not be possible to link the participant to their completed questionnaire or to know the identity of those who participated in the study. Anonymity of the participants also should be enhanced by the lack of the signed consent (Folkman, 2000).

Confidentiality of the research data after it has been collected is also important. As discussed previously, the data will be kept in a locked box after collection. Only this researcher will have access to the data. Once data has been entered into the database, however, this researcher's dissertation committee members could also have access to the data. The data will be kept in a locked box in the researcher's residence for the specified period of time as required by the IRB after data analysis has been completed. Once the time period has expired, the data will be destroyed.

Data Processing

Once data were been coded and entered, this researcher reviewed the data again. This check of the data looked for missing data, potential data entry errors, and out-of-range numbers. This researcher worked with a master's student during data checking.

This researcher and the master's student checked every tenth survey for accuracy. As data entry errors were encountered, the individual survey was identified by its assigned number and was reviewed to check for accuracy. Any data entry errors were immediately corrected once they were identified.

At this point this researcher developed a protocol for handling surveys with missing data that is less than 30 percent of the total survey. As noted previously, those surveys with greater than 30 percent missing data were discarded; those with less than 30 percent missing data were analyzed. The technique of mean replacement or substitution was employed. Mean replacement or substitution involves calculating the mean of the variable without the missing values, and replacing the missing values with the mean of the variable that is available (Munro, 2001).

Once means replacement or substitution was completed, the data were analyzed to look for skewed data, or data that is not evenly distributed when continuous data is being analyzed. Skewed data could have been subjected to various data transformation techniques as described by Green, Salkind, and Akey (2000), but because the variables were normally or near normallydistributed, data transformation was not necessary.

Data Analysis

The statistical techniques of regression analysis and *Chi*-square analysis of were used to analyze the data in this study. These techniques were selected as the most appropriate tests that allowed this researcher to answer the research questions via hypothesis testing.

Regression analysis

The first research question (what effect does depressive symptoms and self-esteem have on the sexual behaviors of urban MSM?) and the third research question (what effect do demographic variables have on depressive symptoms, self-esteem, and sexual behaviors) were answered using regression analysis. Regression, making use of correlations between variables, allows the researcher to make a prediction about the dependent variable because of what is known about the independent variables (Munro, 2001). In this research study, what is known about depressive symptoms and self-esteem, the study's independent, or predictor, variables, will be used to predict sexual behavior, the study's dependent, or outcome, variable.

In order to correctly use regression, certain levels of data are required. To calculate the regression correlation, the researcher must ensure that there are at least two measures on each participant. Although it is possible to use regression with any level of measurement, optimally the measures should be at the interval or ordinal levels of measurement (Munro, 2001).

Regression analysis requires the use of coding for nominal data before data entry and subsequent data analysis. Although there are a few coding procedures that can be used in regression analysis, dummy coding was used in this study to code the data. In dummy coding, nominal data can be assigned the numbers of 0 and 1 where comparisons were made. The nominal data was then entered using these assigned codes (Munro, 2001).

Once the data were collected, entered, and analyzed, interpretation of the regression analysis data began. Since it is was known at this point the effect that the

independent variables (depressive symptoms, self-esteem, and the demographic variables) have on the dependent variable, the researcher had the option of conducting simultaneous regression analysis, hierarchical regression analysis, or stepwise regression analysis based on the measurement levels of the variables. In this study, this researcher decided to use hierarchical regression analysis, where the independent variables are entered in the order determined by the researcher or based on theoretical assumptions. In this study, the independent variables will be entered in the following order: depressive symptoms, self-esteem, and then the statistically significant demographic variables will be entered simultaneously. This researcher has chosen this order since the effects of depression and self-esteem are hypothesized to have more of an effect on the dependent variable of sexual behaviors than the demographic variables. Since the variables of depression and self-esteem were determined to be more important than the demographic variables, these two variables were assigned a higher rank by this researcher and were entered first (Knapp, 1999).

Once the variables were entered in the specified order and data analysis was conducted out using *SPSS*, data interpretation began. *SPSS* provided this researcher with a computer-generated report of the regression analysis. Of particular interest to data interpretation was the overall *R*, *(R^2)*, the *beta-weights*, the *F-statistic*, and the *p value.* For each variable as it is entered, this researcher interpreted the aforementioned test statistics. The *R* represents the meaningfulness of the test for significance, while the *(R^2)* notes the amount of variance that is accounted for *R*, and that notes the significance of the independent variables. *R* and *(R^2)* represent the regression coefficients. These regression coefficients are then converted to *beta weights.* The *beta weights*, since they

standardize the variables, allow the researcher to show which of these variables can be viewed as predictor variables in the regression equation.

Next the *F*-distribution is used to test the significance of the (R^2*s),* and the *F*- or *t*-distribution is used to test the significance of the *beta weights.* *F*- and *t*-distributions with *p*, or significance, values less than .05 are considered significant. From these statistics, this researcher could determine whether the predictor values of depressive symptoms, self-esteem, and demographic variables influence sexual behaviors. The percentage of variance shows the effect of these predictor variables on the independent variable. The higher the percentage of variance, the more effect the predictor variables have on the independent variable of sexual behaviors (Green, Salkind, & Akey, 2000; Huck, 2003; Munro, 2001; Weissfeld & Butler, 1999)

Chi-square Analysis

The second research question (what differences in levels of depressive symptoms, self-esteem, and sexual behaviors exist between ethnic groups?) was answered by computing *chi*-square analyses. *Chi*-square analysis is a non-parametric statistical test that is used when no assumptions are made about the distribution of a variable or variables in a population. *Chi*-square analysis can also be used when there are small sample sizes or distortions of the data. The purpose of the *chi*-square analysis is to allow the researcher to compare the actual number of some variable with the expected number of that frequency (Munro, 2001). *Chi*-square analysis will be an appropriate statistical test to answer the study's third research question based on the projected unequal distribution of the study's sample. Since the number of Hispanic participants is purposefully projected to be larger than the African-American or Caucasian sample, this

study will an unequal distribution of these different ethnic groups and a relatively small number of African-Americans and Caucasians.

In order to use *chi*-square analysis in this study, the variables in the study will need to be entered as categorical variables. Data that are at any other level will need to be converted to categorical variables.

Once the data has been entered and analyzed with *SPSS*, interpretation of the data can begin. Since the third research question will be comparing these different ethnic groups, the *chi*-square technique of the *Kruskal-Willis H* will be used. This technique is to compare two or more groups and is equivalent to the ANOVA, a parametric statistic that was previously discussed. Using SPSS will yield a chi-square test statistic expressed as x^2 , and a level of significance, or a *p* value. If differences are found between the actual numbers of the variables studied and the expected number, and the *p* value is less than .05, these differences in the actual and expected values between groups will be considered significant (Green, Salkind, & Akey, 2000; Huck, 2003; Munro, 2001).

Table 2 below provides a summary of this study's research questions, hypotheses, statistical test to be employed, and data analysis.

Table 2: Research questions, hypotheses, statistical tests, and data analysis techniques

Research Question	Hypothesis	Instrument Used	Statistical Test Employed	Data Analysis
What effect does depressive symptoms and self-esteem have on the sexual behaviors of MSM?	Depressive symptoms and self-esteem will have a significant effect on sexual behaviors.	CES-D RSE SSBQ	Regression analysis	Reported in Chapter 4.
What differences exist in levels of depressive symptoms, self-esteem, and sexual behaviors between ethnic groups?	Depressive symptoms, self-esteem, and sexual behaviors will vary by ethnicity.	CES-D RSE SSBQ	*Chi-square* analysis	Reported in Chapter 4
What effect does selected demographic variables have on depressive symptoms, self-esteem and sexual behaviors?	Demographic variables will have a significant effect on depressive symptoms, self-esteem and sexual behaviors.	SSBQ Demographic questionnaire	Regression analysis	Reported in Chapter 4

Methodological Assumptions

In order to utilize multiple regression and *Chi-square* analysis correctly, certain assumptions of this statistical technique must be noted. These specific assumptions for each test must be noted since they describe the conditions that must be met for that particular statistical test to be appropriately utilized to analyze the data.

Regression Analysis

Although it is known that regression correlations can be calculated using data from all levels of measurement, however, to make assumptions about the population under investigation, the following assumptions about multiple regression must be met:

1) The sample included in the study must be representative of the population.

2) The correlated variables must have a normal distribution.

3) For the variables being correlated, the value of one variable should have nearly equal variability as the other variables.

4) The relationship between the variables should be linear. The points on the scale may not form a perfect line, but should scatter around the line when a scatterplot is calculated (Munro, 2001).

Chi-square Analysis

The non-parametric test of *Chi*-square analysis contains fewer assumptions that must be met based on the nature of this test. These assumptions include:

1) The data needs to be summarized in frequency tables.

2) There must an adequate total sample size of at least 40.

3) The measures obtained must be independent.

4) There must be some basis for data categorization (Munro, 2001).

Limitations

A few limitations can be identified in this study at this point. Three major limitations that may affect the results of this study include:

1) Measurement of data at one point in time. Since data were collected on these participants at only one point in time, inferences about the participants' depressive symptoms, self-esteem, and sexual behaviors can not be made.

2) Convenience sampling. Since randomization and control are not employed, the results may not be truly representative of the population from which the sample was drawn (Creswell, 2003).

3) Use of instruments that have not been normed with the population being studied.

Since these instruments have been normed on mostly Caucasian samples, the use of these instruments on non-Caucasian participants may affect the results. Also, these instruments have not been normed with the population of MSM.

4) Use of instruments that have not been normed once they are translated into another language (Creswell, 2003). Although the instruments used in this study were translated and tested, they have not been normed with the Spanish-speaking population.

Summary of Chapter III

This chapter has detailed the methodology that was employed to conduct this study. By the use of the procedures outlined in this chapter and the techniques that will be used to plan, conduct, and analyze the study's results provides the foundation for subsequent chapters that deal with the study's results and implications of the results.

CHAPTER IV: RESULTS

Introduction

The purpose of this study was to determine the relationship between depressive symptoms, self-esteem, sexual behaviors, and selected demographics in urban men. A cross-sectional, correlational design was used for this study.

Data were collected from men living in an urban area in South Florida who were 18 years of age or older. Convenience sampling strategies were used to recruit participants at various community sites such as bars/clubs, social groups, clinics, etc., where members of this population were available to be sampled.

Data were collected over a four-month period using a self-report questionnaire which consisted of three standardized instruments, as well as a demographic questionnaire. Data were analyzed using Statistical Package for Social Sciences (SPSS) 12.0 for Windows. Descriptive statistics as well as parametric and non-parametric statistics were utilized to conduct hypothesis testing.

Description of the Sample

Response Rate and Post-Hoc Power Analysis

Convenience sampling resulted in a total of 260 questionnaires being distributed to members of this target population. A total of 205 questionnaires were returned. All 205 questionnaires were included in data analysis, since all questionnaires met the aforementioned criteria for inclusion covered in Chapter III. Sixty participants chose not to complete their questionnaire on-site and were given a questionnaire with a self-addressed, stamped envelope to return to the researcher. Of these 60 questionnaires, 14

were returned resulting in a 23.3% mail response rate. Overall, the study had a 78.8% response rate.

Post-hoc power analysis using G*POWER software (Buchner, Erdfelder & Faul, 1997) was conducted in the same manner as described in Chapter III using the same established parameters. For the study's most powerful statistical test of multiple regression with predictor variables, an *alpha* of .05, and a sample of 205 participants, an actual power of 0.9353 for a medium effect size, and an actual power of 0.9997 for a large effects size was noted. These obtained values indicated that the sample size of 205 should be adequate to note associations between the study's variables.

Demographic Characteristics of the Sample

The sample size of this study was 205 participants. Of these 205 participants, 196 (95.6%) reported their age. Table 3 summarizes the descriptive statistics of the variable of age.

Table 3.
Age of the Study's Participants (*n*=196)

M	*SD*	Median	Range
37.28 years	8.298	38.00	37 (21-59)

All 205 participants reported their ethnicity. Table 4 summarizes the variables of ethnicity, birth, language preference, and length of time in the United States. County of origin of the participants is included in Table 5.

Table 4.

Ethnicity, Birth, Language Preference, Length of Time in the US, and Relationship Status of the Participants (*n*=205)

Variable	Descriptive Statistics
Ethnicity	*n*=205 responses
African-American/Black	*n*=14; 6.8%
Caucasians	*n*=30; 14.6%
Hispanic/Latino	*n*=155; 75.6%
All Others	*n*=6; 2.9%
Birth	*n*=201 responses
USA	*n*=61; ~30%
Foreign-born	*n*=141; ~70%
Language Preference	*n*=205 responses
English	*n*=98; 47.80%
Spanish	*n*=107; 52.19%
Length of Time in the US	*n*=137 responses
M	13.43
SD	10.8
Median	10.00
Range	43.25 (0.25-44)
Relationship Status	*n*=203 responses
Yes	*n*=122; 59.5%
No	*n*=81; 39.5%

Table 5.
Country of Origin of Participants (*n*=203)

Country	Frequency (*N*)	Percentage
Cuba	73	35.6
USA	61	29.8
Puerto Rico	10	4.9
Colombia	9	4.4
Venezuela	9	4.4
Brazil	7	3.4
Dominican Republic	6	2.9
Nicaragua	4	2.0
Argentina	2	1.0
Honduras	2	1.0
Germany	2	1.0
Peru	2	1.0
Guatemala	2	1.0
Portugal	2	1.0
Bahamas	2	1.0
Bolivia	1	.5
Mexico	1	.5
Ecuador	1	.5
Switzerland	1	.5
Panama	1	.5
Philippines	1	.5
El Salvador	1	.5
Jamaica	1	.5

Participants were asked to report socioeconomic information that included their highest level of education, employment status, source of income, and total income in US dollars. Table 6 provides a summary of the participants' level of education, employment status, source of income, and total income in US dollars.

Table 6.

Socio-Economic Variables of the Participants (n=205)

Variable	Descriptive Statistics
Educational Level	*n*=191 responses
Less than a High School Education	*n*=5; 2.4%
Completed High School	*n*=30; 14.6%
Associate's Degree	*n*=49; 23.9%
Bachelor's Degree	*n*=58; 28.3%
Master's Degree	*n*=36; 17.6%
Doctoral Degree	*n*=13; 6.3%
Employment Status	*n*=201 responses
Unemployed	*n*=17; 8.5%
Full-time	*n*=160; 78.0%
Part-time	*n*=24; 11.7%
Source of Income	*n*=199 responses
Employment	*n*=186; 90.7%
Disability	*n*=6; 2.9%
Government assistance	*n*=1; 0.5%
Family support	*n*=6; 2.9%

Total Income in US dollars	*n*=178 responses
M	$45,096.85
SD	$32,445.87
Median	$35,000.00
Range	200,000 ($0-$200,000)

Exploratory Data Analyses for Measurement of Variables

Frequency distributions and histograms with the superimposed normal distribution curves were run on SPSS for all measurement variables to determine outliers, skewness, kurtosis, and to note any missing values. It was determined that all major variables were normally-distributed or near normally-distributed. No variables were recoded, and where applicable, total scores for the study variables were computed. The instruments utilized did not contain subscales, so subscale totals were not required. Figures 2, 3, and 4 respectively represent the histograms with superimposed normal distribution curves for depressive symptoms, self-esteem, and sexual behaviors.

Figure 2.

Histogram of the Total Scores: Depressive Symptoms

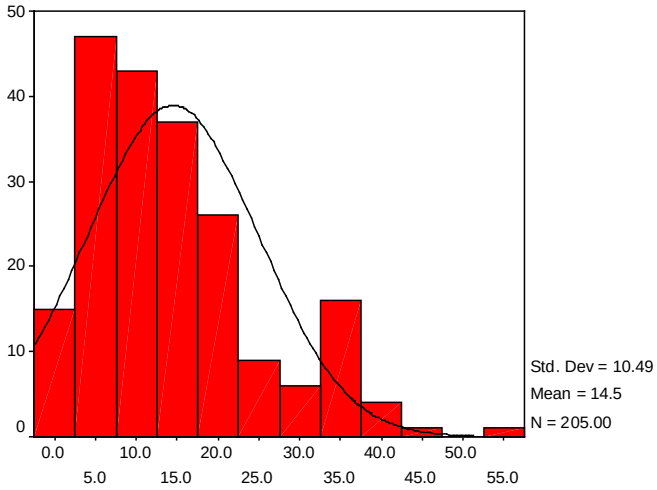


Figure 3.

Histogram of the Total Scores: Self-Esteem

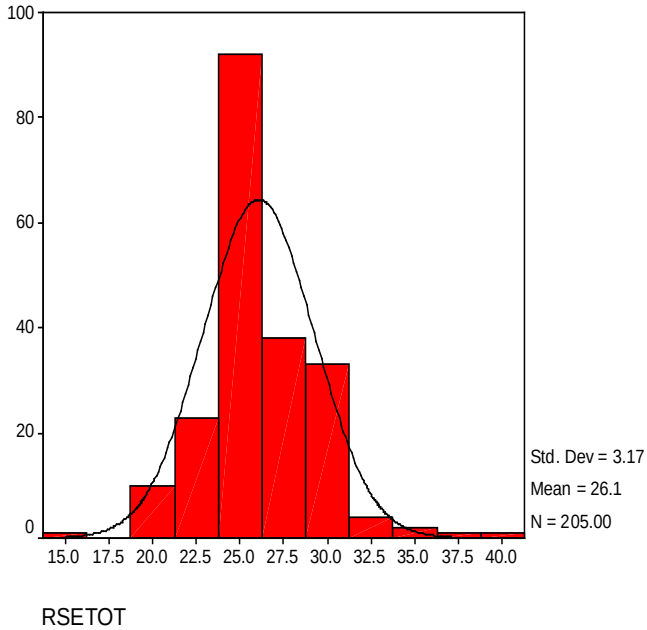
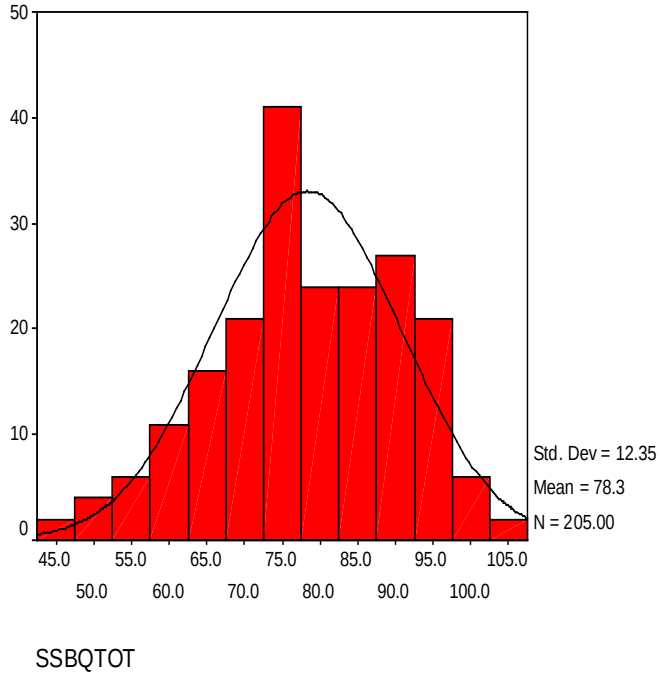


Figure 4.

Histogram of the Total Scores: Sexual Behavior



The Centers for Epidemiological Studies-Depressed Mood Scales (CES-D) was used to measure depressive symptoms. This instrument consists of 20 items rated on a scale of 0 (*rarely or none of the time or less than 1 day*) to 3 (*most or all of the time or 5 to 7 days*), with four items (4, 8, 12, and 16) that are negatively scored. These four items are reverse scored, and then all 20 items were totaled to produce each participant's total score of depressive symptoms. Scores range from 0 to 60, with scores of 16 indicating higher levels of depressive symptoms (Radloff, 1977). A histogram with the superimposed normal distribution curve for the total score of this variable revealed that a relatively normal distribution of scores was noted.

The Rosenberg Self-Esteem Scale (RSE) was used to measure self-esteem. This instrument consists of 10 items rated on a scale of 1 (*strongly disagree*) to 4 (*strongly*

agree), with half of the items (2, 5, 6, 8, and 9) that are negatively scored. These five items are reverse scored, and then all 10 items were totaled to produce each participant's total score of self-esteem. Scores range from 10 to 40, with higher scores indicating higher levels of self-esteem (Rosenberg, 1965). A histogram with the superimposed normal distribution curve for the total score of this variable revealed that a normal distribution of scores was noted.

The Safe Sex Behavior Questionnaire (SSBQ) was used to measure safer sex behaviors. The SSBQ consists of 27 items rated on a scale of 1 (*never*) to 4 (*always*), with 10 items that are negatively scored. These 10 items are reverse scored, and all 27 items are totaled to produce each participant's total score of sexual behaviors. Scores range from 27 to 108, with higher scores indicating safer sex behaviors (DiIorio, Parsons, Lehr, Adame, & Carlone, 1992). A histogram with the superimposed normal distribution curve for the total score of this variable revealed that a normal distribution of scores was noted.

Measurement Assessments

Centers for Epidemiological Studies-Depressed Mood Scale (CES-D)

The CES-D was used to measure depressive symptoms in this study, and demonstrated high reliability estimates with this sample of urban men. The internal consistency (Cronbach's *alpha)* for the total scale was .88. This estimate is relatively consistent with Radloff's (1977) *alpha* of .85 for the general population.

Rosenberg Self-Esteem Scale (RSE)

The RSE was used to measure self-esteem in this study, but did not demonstrate high reliability estimates with this sample of urban men. The internal consistency for the

total scale was .61, which is slightly lower than Rosenberg's (1979) reported *alphas* of .77 to .88. This discrepancy in the two reliability estimates could be related to the heterogeneity of the sample. Samples that are more homogeneous tend to result in lower reliability estimates. Instruments are designed to measure the differences among groups. (Polit, 1996). The participants' self-esteem scores appear to be more homogeneous, therefore, it is difficult for the instrument to discriminate among the differences since they are so similar.

Safe Sex Behavior Questionnaire (SSBQ)

The SSBQ was used to measure sexual behaviors in this study, and demonstrated high reliability estimates with this sample of urban men. The internal consistency for the total scale was .85, which was consistent with the reported *alpha* of .82 reported by DiIorio, et. al. (1992). Table 7 provides a summary of the reliability estimates for the study measures as compared to the instruments' reported reliability estimates.

Table 7.

Reliability Estimates: Internal Consistency (Cronbach's Alpha) Coefficients for Study Measures (N=205)

Instrument	Number of Items	Study Measures
Centers for Epidemiological Studies-Depressed Mood Scale (CES-D)	20	.88
Rosenberg Self-Esteem Scale (RSE)	10	.61
Safer Sex Behavior Questionnaire (SSBQ)	27	.85

Descriptive Findings for the Study Variables

Centers for Epidemiological Studies-Depressed Mood Scale (CES-D)

The CES-D consists of 20 items with total score ranging from 0 to 60. Scores greater than 16 indicates higher levels of depressive symptoms. The total CES-D scores in this study ranged from 0 to 54 (*M*=14.50, *SD*=10.49). Using total scores above 16 to indicate higher levels of depressive symptoms, it was noted that 69 (33.7%) of the participants had higher levels of depressive symptoms. Using total scores of 16 and below to indicate lower levels of depressive symptoms, it was noted that 136 (66.3%) of the sample had lower levels of depressive symptoms.

The mean of 14.50 noted in this study is higher than that noted by Radloff (1977). The mean from this large sample of Caucasians was noted to be between 7.94 and 9.25. Although this study was largely a non-Caucasian study, the results from this study are different from those reported by Radloff (1977). This would indicate that members of this population are more likely to have higher levels of depressive symptoms than the general population.

Rosenberg Self-Esteem Scale (RSE)

The RSE consists of 10 items with the total score ranging from 10 to 40. Higher scores indicate higher self-esteem. The total RSE scores in this study ranged from 16 to 40 (*M*=26.06, *SD*=3.169). These results indicate that the mean in this study has relatively high levels of self-esteem. Since there are no “cut off” scores to indicate lower versus higher levels of self esteem, it is necessary for this research to determine the demarcation point between lower and higher self-esteem. The point established as the demarcation

point was the mean. Any total scores less or equal to 26 will be interpreted as lower self-esteem, while scores greater than 26 will signify higher levels of self-esteem.

The mean of 26.06 noted in this study is lower than that reported by Rosenberg (1965). The mean for men in Rosenberg's (1965) study was 33.83 (*SD*=4.50).

Safe Sex Behavior Questionnaire (SSBQ)

The SSBQ consists of 27 items with total scores ranging from 27 to 108. Higher scores indicate higher levels of safer sex behaviors. The total SSBQ scores in this study ranged from 45 to 104 (*M*=78.34, *SD*=12.36). Again, since there are no "cut off" scores to indicate unsafe versus safer sex behaviors, it is necessary for this researcher to determine the demarcation point between unsafe versus safer sex behaviors. This point was established again as this study's mean. Total scores of 78 or less will indicate lower levels of safer sex behavior, while scores greater than 78 will indicate higher levels of safer sex behavior.

The mean of 78.34 for this study's sample is slightly higher than the sample mean reported by DiIorio, et al. (1992). The mean for a large sample (*n*=330) of mostly heterosexual men was 69.2 (*SD* not reported). Table 8 provides a summary of the descriptive statistics of this study's major study variables.

Table 8.

Descriptive Statistics of the Major Study Variables (N=205)

Instrument	*M*	*SD*	Range	Adjusted Mean
CES-D	14.50	10.49	0-54	15.172 (*SE*= .884)
RSE	26.06	3.169	16-40	26.011 (*SE*= .266)
SSBQ	78.34	12.36	45-104	78.290(*SE*=.821)

Hypothesis Testing

Hypothesis 1

The first research question of this study (what effect does depressive symptoms and self-esteem have on sexual behaviors?) was subjected to hypothesis testing. Hypothesis 1 stated that depressive symptoms and self-esteem will have a significant effect on sexual behaviors.

Hierarchical regression analysis was used to test this Hypothesis 1. Hierarchical regression is used when the researcher wants to force the order of the entry of the variables instead of entering all variables at once as in standard regression analysis (Munro, 2001). Hierarchical regression analysis was chosen as the statistical test to test Hypothesis 1 since this researcher has a theoretical rationale for order of entry of the variables. Since the focus of this study is to determine the effects of depressive symptoms and self-esteem on sexual behaviors, it is necessary to enter depressive

symptoms and self-esteem first, and then enter the demographic variables in a subsequent step of the regression analysis.

Before hypothesis testing began, correlations between the study variables were noted. Using the one-tailed Pearson product-moment correlation coefficient (*r*) noted that there was a weak positive relationship between the depressive symptoms and self-esteem ($r = .143$, $p < 0.05$); there was a weak negative relationship between the depressive symptoms and sexual behaviors ($r = -.144$, $p < 0.05$); and there was a weak negative relationship between self-esteem and sexual behaviors($r = -.170$, $p < 0.01$). Noting the correlation between the depressive symptoms and self-esteem, it was decided that the potential effect that these two variables have on sexual behaviors would be best noted if they would be entered into the regression analysis first, since this researcher wants to know the effect that each separate variable has on sexual behaviors.

Since both depressive symptoms and self-esteem have a similar correlation with sexual behaviors (-.144 and -.170 respectively), deciding which variable to enter into the regression equation first was not important. Therefore, it was chosen by this researcher to enter depressive symptoms and self-esteem as the independent variables, and sexual behaviors was entered as the dependent variable. Regression results indicated that depressive symptoms and self-esteem resulted in a model that was overall statistically significant ($R^2 = .044$, $F(2, 202) = 4.618$, $p < .01$). Both of the independent variables contributed significantly to the analysis ($p < .008$ for depressive symptoms and $p < .029$ for self-esteem). The regression statistics indicate that depressive symptoms and self-esteem do have a statistically significant effect on sexual behaviors, and account for 4.4% of the variance in sexual behaviors.

Hypothesis 2

The second research question of this study (what differences exist in levels of depressive symptoms, self-esteem, and sexual behaviors between ethnic groups?) was subjected to hypothesis testing. Hypothesis 2 for this study stated that depressive symptoms, self-esteem, and sexual behaviors will vary by ethnicity.

Chi-square analysis was used to test the second research hypothesis. Before *chi-square* analyses were run, the means, standard deviations, and range of the scores of depressive symptoms, self-esteem, and sexual behaviors by ethnic group was noted. These statistics are summarized in Tables 9, 10, and 11 respectively.

Table 9.

A Comparison of Depressive Symptoms by Ethnicity (N=205)

Ethnicity	*N*	*M*	*SD*	Adjusted Mean
African-American	14	17.07	10.767	17.071 (*SE*=2.771)
Caucasian	30	11.77	9.069	11.767 (*SE*=1.893)
Hispanic/Latino	155	15.14	10.662	15.135 (*SE*= .833)
All other	6	5.83	6.432	5.833 (*SE*=4.233)
Total	205	14.50	10.487	14.542 (*SE*=1.366)

Table 10.

A Comparison of Self-Esteem by Ethnicity (*N*=205)

Ethnicity	*N*	*M*	*SD*	Adjusted Mean
African-American	14	25.93	2.814	25.929; *SE*= .849
Caucasian	30	25.57	2.285	25.567; *SE*= .580
Hispanic/ Latino	155	26.21	3.356	26.213; *SE*= .255
All others	6	25.00	2.898	25.00; *SE*=1.297
Total	205	26.06	3.169	25.671; *SE*= .419

Table 11.

A Comparison of Sexual Behaviors by Ethnicity (*N*=205)

Ethnicity	*N*	*M*	*SD*	Adjusted Mean
African-American	14	79.57	10.052	79.571; *SE*=3.256
Caucasian	30	72.30	11.351	72.300; *SE*=2.224
Hispanic/ Latino	155	79.28	12.636	79.284; *SE*= .979
All others	6	78.34	12.355	78.080; *SE*=1.606

By examining these statistics, it appears that there are differences in depressive symptoms, self-esteem, and sexual behaviors when stratified by ethnicity. In order to test if these differences are statistically significant, it is necessary to subject these variables to statistical testing with C*hi-square* analysis. *Chi-square* analysis is necessary to test these

variables since there are unequal numbers of each ethnic group (Munro, 2001). In this case, it is necessary to conduct follow-up tests with means with unequal expected frequencies as described by Green, Salkind, and Akey (2000). Because of unequal groups, this method requires that the researcher assume that the groups are equal in number. The statistical test of C*hi-square* analysis will adjust the groups to make them equal in the analysis.

In terms of depression, *Chi-square* analysis supported the hypothesis that there are statistically significant differences in depressive symptoms among ethnic groups. This analysis shows that the four ethnic groups do differ statistically, x^2 (40, N=205) = 94.40, p=.000). This allowed this researcher to conclude that African-Americans/Black are most likely to experience depressive symptoms of all ethnic groups. In addition, Hispanics/Latino are more likely to experience depressive symptoms than Caucasians. The ethnic group least likely to experience depressive symptoms was the group who reported "other" as their ethnic identity.

In terms of self-esteem, *Chi-square* analysis supported the hypothesis that there are statistically significant differences in self-esteem of these various ethnic groups. This analysis shows that the four ethnic groups differ statistically, x^2 (19, N=205) = 219.683, p=.000). This allows this researcher to conclude that Hispanics/Latinos are more likely to have higher levels of self-esteem of all ethnic groups. African-Americans/Blacks are more likely to have higher levels of self-esteem when compared to Caucasians. The ethnic group with the lowest self-esteem is the group who reported "other" as their ethnic identity.

In terms of sexual behaviors, *Chi-square* analysis supported the hypothesis that there are statistically significant differences in the sexual behaviors of these various ethnic groups. The analysis shows that the four ethnic groups in this study do differ statistically, x^2 (49, N=205) = 71.829, p< .018).

Hypothesis 3

The third research question of the study (what effect do selected demographic variables have on depressive symptoms, self-esteem, and sexual behaviors?) was subjected to hypothesis testing. Hypothesis 3 for this study stated that demographic variables will have a significant effect on depressive symptoms, self-esteem, and sexual behavior.

Hierarchical regression analysis will be used to test the third and final hypothesis. Before regression analysis to begin, correlations between the demographic variables needed to be determined. Using both one-tailed and two-tailed Pearson product-moment correlation coefficients (*r*), a few significant correlations were. These correlations between the major study variables and the demographic variables are noted in Table 12, and the significant correlations between demographic variables are noted in Table 13.

Table 12.
Bivariate Correlations Between the Major Study Variables and Demographic Variables (N=205)

	Depressive Symptoms	Self-Esteem	Sexual Behaviors
Income	-.262*	-.184*	
Language	.137*		.170*
Education	-.186**		
Birth			.166*

*$p < .05$, **$p < .01$

Table 13.

Bivariate Correlations Between Demographic Variables (N=205)

	Age	Language	Education
Income	.264**	-.381**	.334**
Birth			-.311**

*$p < .05$, **$p < .01$

Noting the small number of significant relationships between variables, this will influence the model for entering the variables into the regression analysis. Since there are only three significant correlations with depression; one significant correlation with self-esteem; and two significant correlations with sexual behaviors, variables will be entered into the regression analysis simultaneously except for self-esteem which can not be entered into the regression equation. With such small correlations, the effects of the variables on each other may be obscured if they are not entered in this manner.

In terms of depression, the effects of income, education, and language preference (English versus Spanish) have a significant effect on depressive symptoms, R^2= .075, F (3, 164) = 4.431, p< .005. Regression results indicated that income, education and language preference resulted in a model that was overall statistically significant. The independent variables of income (p= .001), language (p= .049) and education (p= .010) all contributed to significantly to the analysis. The regression statistics indicate that income, education, and language preference account for 7.5% of the variance in depressive symptoms.

In terms of self-esteem, the effects of income, language, and age do not have a significantly significant effect on self-esteem, R2= .045, F(3, 167)= 2.603, p >.05. Regression results resulted in a model that was not overall statistically significant. The variables of income, language, and age do account for 4.5% of the variance in self-esteem, but this is not statistically significant.

In terms of sexual behaviors, the combined effect of language preference and birth (US versus foreign birth) was statistically significant, R^2= .075, F (2, 200)= 3.420, p< .035. Regression results indicated that these variables resulted in a model that was overall statistically significant. In addition, the variables of language (p< .015) and birth (p< .018) were statistically significant. This indicates that language preference and birth account for 7.5% of the variance in sexual behaviors.

The results of these regression analyses allows the researcher to evaluate the effect that that certain demographic variables have on the major study variables of depressive symptoms, self-esteem, and sexual behaviors. Hypothesis Three was only

partially supported since the demographic variables have a statistically significant influence on depressive symptoms and sexual behaviors, but not on self-esteem.

Summary of Chapter IV

A convenience sample of 205 urban MSM provided the sample for this study. The majority of this study's participants were Hispanic (75.6%; *n*=155), and over half (59.5%, n=122) were involved in some form of relationship. Over two-thirds (*n*=141; 68.8%) of the participants were foreign-born. The sample consisted of a large number of well-educated men, as over three-quarters of the sample (81.7%) had completed at least an associate's degree. The median yearly income for the participants was approximately$45,097 (*SD*=$32,445.87) and ranged from $0 per year to $200,000 per year.

The statistical analyses of this study tested three hypotheses. Hypothesis One was supported, as depressive symptoms and self-esteem did have a statistically significant influence on sexual behaviors when subjected to regression analysis. Hypothesis Two was supported, as the different ethnic group varied significantly in terms of depressive symptoms, self-esteem, and sexual behaviors. Depressive symptoms did vary significantly by ethnicity, with African-Americans reporting higher levels of depressive symptoms. Self-esteem also varied significantly by ethnicity, with the other ethnic group reporting the lowest levels of self-esteem. Sexual behaviors varied with African-Americans reported the highest levels of safer sexual behaviors. Hypothesis Three was only partially supported. Certain demographic variables had a statistically significant influence on depressive symptoms and sexual behaviors, but not on self-esteem.

The statistical analysis of the data allowed this researcher to draw some conclusions about the study variables. First, depressive symptoms and self-esteem do have a statistically significant influence on sexual behaviors in this study. Second, there are statistically significant differences in depressive symptoms, self-esteem, and sexual behaviors among the various ethnic groups included in this study. Lastly, although a number of relationships between the demographic variables and the study variables were found, only certain demographic variable had a statically significant influence on depressive symptoms and sexual behaviors, but not on self-esteem.

CHAPTER V: DISCUSSION AND CONCLUSION

Introduction

This chapter summarizes the study, and presents the findings in relationship to the major study variables of depressive symptoms, self-esteem, and sexual behaviors and the demographic characteristics of the participants. This chapter will also note the significant and non-significant predictors of safer sexual behavior in this sample of MSM. Limitations of the study and implications for nursing education, practice, policy, culture, research, and theory are also included.

Summary of the Study

Although MSM have been the group that has been the most affected by the HIV epidemic of the past 25 years (Centers for Disease Control and Prevention, 2005), this group continues to experience high rates of HIV infection despite prevention efforts. Although prevention messages have been targeted to this group throughout the epidemic, recent evidence suggests that there is an increase in the new HIV rates of this population, especially those who were too young to experience the epidemic before the age of effective HIV treatment. By studying this population, characteristics of this group can provide some insight as to what factors (such as depressive symptoms, self-esteem or demographic variables) may influence sexual behaviors. Significant findings could then be translated and used to develop nursing interventions that may help to decrease the risk of HIV and STD infection for this population.

A review of the literature on this population provided a wealth of information. Although it is generally accepted that participation in certain sexual behaviors place the individual at risk for HIV infection and STDs, the data regarding the relationship of

depressive symptoms and self-esteem on sexual behaviors is unclear. In addition, the effect of these variables with a larger sample of members of ethnic groups other than Caucasians is absent from the literature.

The theoretical framework that guided this study is Flaskerud and Winslow's Vulnerable Populations Conceptual Model (1998). This model includes the components of resource availability, relative risk, and health status. The variable of depressive symptoms is contained in the component of health status; relative risk includes the variables of self-esteem and sexual behaviors; and the study's demographic variables are included in the component of resource availability. The relationships of these variables in the model allowed linkage of these variables to each other. From this theoretical framework, three research hypotheses were generated that were tested in this study:

H1: Depressive symptoms and self-esteem will have a significant effect on sexual behaviors.

H2: Depressive symptoms, self-esteem, and sexual behaviors will vary by ethnicity.

H3: Demographic variables will have a significant effect on depressive symptoms, self-esteem, and sexual behaviors.

This study employed a cross-sectional, correlational survey design with a convenience sample of urban MSM in order to study the relationships between the major study variables and demographic variables, and to determine the influence that these variables may have on each other. Data were collected via anonymous, self-reported questionnaires from urban MSM (N=205) at various sites in South Florida over a four-month period in 2005. Data were analyzed using SPSS 12.0. The hypotheses were

subjected to testing using the Pearson product-moment correlation coefficients (*r)*, hierarchical regression, and *Chi*-square analysis.

Urban MSM ages 21 to 59 participated in this study. The sample consisted of a large percentage of Hispanic men (75.6%; *n*=155) who were born outside of the US (68.8%; *n*=144) and who preferred to complete the survey in Spanish (52.2%; *n*=107). In addition, the study consisted of a large percentage of highly educated men (81.7% with at least an Associate's Degree; *n*=156).

Data from this study support Hypothesis One (depressive symptoms and self-esteem will have a significant effect on sexual behaviors); support Hypothesis Two (depressive symptoms, self-esteem, and sexual behaviors will vary by ethnicity); and partially support Hypothesis Three (demographic variables will have a significant effect on depressive symptoms, self-esteem, and sexual behaviors).

Discussion of Findings

Demographic and Background Characteristics of the Sample

Since this study employed convenience sampling to collect data, it is necessary to compare this study's sample with the demographics of Miami-Dade County, the study's principal data collection setting. The exact demographics of the population of MSM in the US are unknown. Although it has been estimated that 10% of the adult US population is exclusively homosexual, it is impossible to know the exact number. This source, although quite outdated, does take into account the number of men who are not exclusively homosexual, but who have sexual relationships with other men, reported to be up to 38% (Kinsey, Pomeroy & Martin, 1948). Where possible, the study's demographics will be compared with previous research.

The most interesting demographic variable of this study is ethnicity. This study was composed of 75.6% (*n*=155) Hispanics/Latinos; 14.6% (*n*=30) Caucasians; 6.8% (*n*=14) African-Americans/Blacks; and 2.9% (*n*=6) members of other ethnic groups. These study demographics do not exactly mirror the demographics of the study's principal setting. The setting is composed of 60% Hispanics/Latinos; 20% African-Americans/Blacks; 10% Caucasians; and 10% other (Florida Department of Health, 2005; Miami-Dade County Department of Health, 2003). With the overrepresentation of Hispanics/Latinos and Caucasians, and the under representation of African-American/Blacks and the ethnic group of "Other"in this study, the sample is not truly representative of the population from which it was drawn. This is one of the disadvantages of using convenience sampling, as truly representative samples of the population may not occur because of this sampling technique (Salkind, 2000a).

The language preference of the participants is also important to note. The survey was available for participants to complete in either English or Spanish. Almost three-quarters of the participants (69%; *n*=107) opted to complete the study in Spanish. In addition, it was noted that a large percentage (68.8%; *n*=141) of the sample was foreign born. Of the foreign born participants, 73 (*n*=51.7%) were born in Cuba. The large number of Cubans in the study is not surprising because of the ethnic composition of Miami-Dade County, Florida. Of the 1.2 million persons in the county who are of Hispanic origin, over 50% (*n*=650,000) are Cubans (United States Census Bureau, 2000). Both of these demographics are interesting to note in that they give some indication of the acculturation status of the participants. Although this is by no means a measure of

acculturation, these results seem to indicate that a majority of this sample are not fully acculturated into mainstream US culture.

The relationship status of the participants in this study noted that 59.5% (*n*=122) of the men who participated in the study were involved in an intimate relationship. This statistic is slightly different than that reported by Kelly, Sikkema, Winett, Solomon, Roffman, et. al. (1995) who surveyed nearly 6,000 MSM and found that nearly 33% reported being involved in an intimate relationship. This statistics is more consistent with the Koblin, Chesney, Husnick, Bozeman, Celum, Bunchbinder, et. al., (2003) study that found that 49% (*n*=2,123) of their participants were involved in an intimate relationship.

This study consisted of a large number of well-educated men. Only 35 participants (17%) of the 191 participants who reported their highest educational level did not have a college degree. One hundred seven (52.2%) had at least a Bachelor's degree. Of those studies that comprise the literature review that included educational level as one of the demographic variables, Dilley, McFarland, Sullivan, and Discpola (1998) (*n*=30, 55%); Zea, Reisen, and Poppen (1999) (*n*=53, 50%); Paul, Catania, Pollack, Moskowitz, Canchola, Mills, et. al.(2002) (*n*=2017, 70%); Bancroft, Janssen, Strong, and Vukadinovic (2003) (*n*=616, 93%); Martin and Knox (1997) (*n*=162, 35.6%) reported a large number of participants with at least a Bachelor's degree.

Relationship Between the Major Study Variables

The results of the statistical analysis conducted to test Hypothesis One (depressive symptoms and self-esteem will have a significant effect on sexual behaviors) in this study indicated that there was a statistically significant relationship between depressive symptoms and sexual behaviors or self-esteem and depressive behaviors. In terms of

depressive symptoms and sexual behaviors, the study's findings were inconsistent with Dilley, et. al. (1998) who reported that depression had no effect on sexual behavior (*OR*=0.94, *CI*= 0.16-5.8; *p*= 0.96), but consistent with Kelly, St. Lawrence, and Brasfield (1991) noted that men with lower depression scores participated in higher risk sexual activity (*r*= .039, *p*> .05) and Bancroft, et. al. (2003) reported that those who were more depressed reported more sexual activity (*t*=12.1, *df*=573; *p* < .001). In terms of self-esteem, the results of this study are inconsistent with the following studies who reported that there is no relationship between self-esteem and sexual behaviors: Perkins, Leserman, Murphy, & Evans (1993), (*OR*=0.5, *CI*=0.2-1.3, *p*= .13); and Siegel, Mesagno, Chen, & Christ (1989), (*F*=0.226, *p*= 0.112); but not consistent with Martin and Knox (1997) who reported that self-esteem did influence sexual behavior (*F*(1, 454)=3.37, *p*< .02).

The results of the statistical analysis conducted to test Hypothesis 2 (depressive symptoms, self-esteem, and sexual behaviors will vary by ethnicity) in this study indicated that statistically significant differences existed in terms of depressive symptoms, self-esteem, and sexual behaviors among the various ethnic groups in the study. These differences in depressive symptoms, self-esteem, and sexual behaviors by ethnicity are difficult to interpret, as studies that have examined these variables in the population of MSM do not exist. Although it is known in the general population that the prevalence of depression is higher in Caucasians than African-Americans or Mexican-American Hispanics (*p*= .001), African-Americans and Mexican-American Hispanics are more likely to experience dysthymic disorder than Caucasians (*p*< .01) (Riolo, Nguyen, Greden & King, 2005), and that college-aged African-Americans have higher levels of

self-esteem than college-aged Caucasians or Hispanics/Latinos (*M*=3.29, *M*=2.21, *M*=2.34; *F*(2, 472) = 6.85, *p*= .0001) (Negy, Shreve, Jensen, & Uddin, 2002), the findings of this study do not support these previous findings. In fact, in this study, African-Americans and Hispanics/Latinos are more likely to have more depressive symptoms than Caucasians or the Other ethnic group (x^2 (40, *N*=205) = 94.40, *p*=.000). In terms of self-esteem, Hispanics/Latinos (*n*=155, *M*=26.21, *SD*=3.356) are more likely to have higher levels of self-esteem than African-Americans (*n*=14, *M*=25.93, *SD*=2.814), Caucasians (*n*=30, *M*=26.21, *SD*=3.356), or those who identify as the "other" ethnic group (*n*=6, *M*=25.00, *SD*=2.898), (x^2 (19, *N*=205) = 219.683, *p*=.000). The reasons for these differences in these variables by ethnicity are unclear at this point.

Most interesting are the scores on the SSBQ. DiIorio, et. al., (1992) reported that the mean score for men on the SSBQ was 69.2 (*SD* not reported). The mean score for participants in this study was 78.34 (*SD*=12.36, range=45-104), which is higher than the score reported by DiIorio, et. al. (1992). This may indicate that safer sex messages are reaching participants of this study, despite the fact that HIV infection rates remain steady with this population (Centers for Disease Control and Prevention, 2005). Given the fact that African-American men have very high HIV infection rates (Centers for Disease Control and Prevention, 2005), it is even more interesting to note that African-American men had the highest score on the SSBQ than Caucasians and Hispanics/Latinos. Even though a small number of African-Americans/Blacks were included in the study (*n*=14), perhaps these men are practicing safer sexual behaviors because of the media attention given to the soaring HIV infection rates in the African-American community. Caucasians had the lowest scores on the SSBQ, but have the lowest rates of new HIV

infections (Centers for Disease Control and Prevention, 2005). Perhaps safer sex behavior messages may not be reaching this ethnicity since the messages are being targeted at ethnic minority MSM. From the results of this study, all ethnic groups need to be the target of education concerning HIV risk factors and transmission of infection.

The results of the statistical analysis conducted to Hypothesis Three (demographic variables will have a significant effect on depressive symptoms, self-esteem, and sexual behaviors) in this study indicated that certain demographic variables have a statistically significant effect on depressive symptoms and sexual behaviors, but no significant relationships were noted with self-esteem. Results indicated that it was possible to predict depression and sexual behaviors, but not self-esteem by certain demographic variables.

Limitations of the Study

Results obtained from this study of urban MSM provide some insight into the relationship of variables that could be used to predict sexual behaviors in this study. Results from the study could be utilized to develop nursing interventions and to develop targeted educational strategies for this population in order to encourage safer sexual behaviors and to decrease the risk for HIV infection and other STDs. Although this study does contribute to the knowledge base of what is known about this population, this study is not without limitations, however. In addition to the limitations described in Chapter One, further identified limitations include:

1. The study's research design, the cross-sectional, correlational design, limits generalizability (Salkind, 2000a). The results of this study, therefore, can not be generalized to the larger population of MSM.

2. The study's sampling strategy of convenience sampling weakens the study (Salkind, 2000a). Because of the use of this sampling strategy, it can not be assumed that the participants in this study are truly representative of the larger population of MSM. In addition, a large percentage of the study (32.2%, *n*=66) of the sample was collected using snowball sampling. This presents an additional weakness in that all participants who were recruited in this manner may tend to be more homogeneous and may even be less representative of the larger population.
3. Data were collected during a specified time period as noted previously. There may have been a different pool of participants if the data were collected at a different time frame in the year, or for a longer length of time.
4. The self-report questionnaire may have influenced the results. Use of a self-report questionnaire could result in participant bias or other inaccuracies that could affect the results.
5. Many sites that could have been used as data collection sites were not utilized. These included places of worship, community agencies, and beaches. These were not utilized for a variety of reasons. Places of worship and community agencies were not utilized because this researcher could not establish contact and gain permission from these agencies to access this population. Beaches were not used as a data collection site because the established sample size was reached before using this site. Elimination of these sites for data collection sites may have resulted in a less diverse sample.
6. Researcher presence during data collection could have some effect on the results. Participants may have been influenced by the presence of the researcher and may have responded to the questionnaire in the manner perceived to be more socially-acceptable to the researcher.
7. The small incentive that was used to compensate participants for their time spent in completion of the study may have had some influence on the results.

Participants may have felt obligated to complete the study only to receive the incentive.

Implications for Nursing

In the United States, MSM comprise a large percentage of the cases of AIDS. Although these rates have decreased slightly or remained steady over the past few years, there is a growing concern that a resurgence in new HIV infections in this group may be occurring (Centers for Disease Control and Prevention, 2005). Based on this fact, all MSM should continue to be educated and informed that certain sexual behaviors could result in acquisition of HIV infection. Strategies and interventions can be developed to reach this population and to educate them about safer sexual behaviors that could decrease HIV and STD transmission.

Since it was not addressed in this study, it is not known how much knowledge this sample possesses on HIV transmission, risk factors, etc. In addition, it is not known where this sample receives or has received information about HIV infection. Since a large percentage (68.8%; *n*=141) of the sample was foreign-born, it cannot be assumed that they have received education from their country of origin, or if they have received HIV education while residing in the US. As this sample's knowledge level and source of HIV information about HIV infection is not known, it is not possible to know if this sample of MSM even perceives themselves at risk for HIV infection from their sexual behaviors.

Education

This research study's findings have implications for all levels of nursing education, including all levels of preparation of nursing curricula, conferences, and continuing education courses. Nursing curricula that contains content on HIV/AIDS should provide information on HIV transmission, risk factors for infection, and prevention of transmission of HIV/STDs within the context of this population. Nursing

students, practicing nurses, and advanced practice nurses should be educated on the epidemiology of HIV, as it pertains to this particular population. All nursing education should be culturally sensitive and all nursing interventions should be adapted in order to be culturally sensitive to the needs of the target population.

In addition, all nurses should be educated on the vulnerability often experienced by members of this sexual minority population. Often members of this population attempt to conceal their sexual orientation during encounters with nurses and other healthcare providers. This may be related to the fact that members of this population may have experienced prejudice, which may have resulted in feelings of alienation from society. These feelings of prejudice and alienation may have an impact on the mental health and self-esteem of MSM, thereby rendering them vulnerable to physical and psychological illnesses. By educating nurses about this vulnerable population, nurses can gain an appreciation of the challenges faced by MSM that may impact mental health.

Nurses also need to be educated about the healthcare needs of ethnic minority MSM. Compared to Caucasians, MSM who are members of an ethnic minority do not seek healthcare services for HIV testing and counseling until much later in the disease course (Shapiro, Morton, McCaffrey, Senterfitt, Fleishman, Perlman, et al., 1999). MSM who are members of ethnic minorities face more challenges because of their ethnic status as well as their sexual orientation or preference. Nurses need to be aware that the racial disparities that exist in HIV disease may have a more significant impact on the health of these men. This point is made clear by the results of this study that showed that Hispanic men practiced fewer safer sex behaviors than men from other ethnic groups who were included in this study, which places them at risk for HIV and STDs.

Nurses with a special interest in providing care to this population should be afforded the opportunity to provide such care via precepted clinical experiences, conferences, and workshops conducted by nurses who are established experts in the care of this population. Content in these structured educational experiences needs to include HIV and STD counseling techniques that are geared toward MSM, and that will include encouraging members of this group to seek mental health services as well HIV and STD testing as indicated.

Practice

Nursing students, practicing nurses, and advanced practice nurses are in a unique position to develop, implement, and evaluate education and prevention programs that are targeted toward this population. These education and prevention programs that are targeted to this population need to be geared toward different ages and ethnic groups of MSM, as well as to those who are in all forms of relationships.

Education and prevention programs that are developed by nurses must include content on behavior change theory, such as the Health Belief Model, as its core component. The Health Belief Model examines clients' perceived susceptibility, perceived severity, perceived benefits of changing behavior, perceived barriers to changing behavior, cues to action, and self-efficacy (Rosenstock, Stretcher, & Becker, 1994). The goal of these education and prevention programs is to be effective in helping MSM identify high risk sexual behaviors, motivate them in attempting to substitute these high risk behaviors for less risky behaviors, and to support and sustain this behavior change (Hughes, 2003).

Nurses who work with members of this population must be comfortable with sexual history taking and frank discussions of sexuality. Many members of this population may not self-identify as a man who has sex with men because of stigmatization, denial, or discomfort with their sexual orientation. Nurses can best assess their client's risk by displaying a non-biased, non-judgmental, straightforward approach to history taking with all clients, both male and female. Nurses can conduct a quick assessment of sexuality by asking all clients a simple question such as "do you have sex with men, women, or both?" This question allows the client the opportunity to discuss sexuality issues with nurses without being labeled or stereotyped (Young, 2003). Once this barrier has been broken with the client, a more in-depth assessment of the client's risk for HIV and STDs can occur. It is important for the nurse to continually reinforce to the client that HIV is caused by sexual behaviors, not by sexual orientation.

In addition to sexuality issues, nurses must also become comfortable and proficient in screening members of this population for depressive symptoms. Nurses, as well as other healthcare professionals, report that they are not comfortable or competent in screening clients for mental health conditions. In terms of depressive symptoms, nurses are in a prime position to screen all clients for depressive symptoms. Clients who are experiencing depressive symptoms can be referred by the nurse to a physician or nurse practitioner for a more in-depth assessment and possible treatment.

Screening for depressive symptoms by nurses in important not only for the population of MSM, but for all clients. In this study, it was noted that 69 (33.7%) of the 205 participants had CES-D scores above 16, which is indicative of a greater risk of depression (Radloff, 1977). This number is concerning, but a study by Hasin, Goodwin,

Stinson and Grant (2005) noted the lifetime and 12-month prevalence of major depressive disorder in a large study of 43,093 participants in the general population. Lifetime prevalence was noted to be 13.23%, while 12-month prevalence was 5.28%. Rates of depression were higher in women, Native Americans, middle-aged persons, and those who were not involved in an intimate relationship. Alcohol use, drug use, nicotine use, and anxiety and personality disorders increased both the lifetime and 12-month prevalence. Although the study conducted by Hasin, et. al. (2005) did not address the population of MSM, it makes an important point in that all clients need to be screened for depressive symptoms. With such a large percentage of MSM who met criteria for depressive symptoms that was noted in this study, it is even more important that nurses who work with the population to be committed to screening for depressive symptoms.

Nurses have the responsibility of providing both verbal and written information for members of this population on HIV infection and mental health issues. Written information should be available to members of this population where it can be easily accessed. Written information must include information on the reasons why members of this group are at risk for certain health conditions such as HIV infection and alterations in mental health. This written information should be available in other languages in addition to English, and should be written at an appropriate reading level based on the demographics of the population served so that the information can be comprehended. Those for whom literacy is a challenge, the nurse can develop creating teaching strategies that employ either audio or video programs that present this important information without relying on written material.

Nurses working with MSM can be instrumental in addressing the problem of HIV infection and of the potential for depressive symptoms in this population by developing and conducting group educational and support sessions. In these group sessions that are targeted to this population, nurses can present information on HIV, self-esteem, and depressive symptoms as they pertain to this population. In addition, information can be presented on these topics as well as other topics that may have an impact on sexual behaviors that may in turn place the client at risk for HIV infection. The over-arching goals of these group sessions are to present educational information; to promote self-esteem; to identify depressive symptoms; and to develop skills such as condom negotiation; and to build supports and networks for members of a marginalized population.

Cultural Implications

The results of this study have cultural implications for nursing. In addition to adapting nursing interventions to meet the cultural needs of MSM from various cultural and ethnic groups as previously discussed, this study's results point out additional cultural implications for nursing.

First, little is known about foreign born MSM, especially in terms of depressive symptoms, self-esteem and sexual behaviors. Foreign born MSM may experience a distinct set of challenges not experienced by MSM who are born in the US. The impact of these challenges on the mental health and sexual behaviors of these foreign born MSM is unknown. Unless this subgroup of MSM is the subject of research studies that focus on these variables, some insight into the unique issues confronting this group will not be known.

Second, this study's ethnic composition demonstrates the challenge of including African-American/Black MSM. Although this researcher made every attempt to survey as many of these MSM as possible, less African-American/Black MSM were available at the study sites to be surveyed as compared to Hispanics and Caucasians. In addition, even though there were fewer of these men available at the study sites than other ethnic groups, many African-Americans/Blacks were not interested in participating in the study. In this study, less is known about African-Americans/Blacks in terms of the study's variables. This ethnic group also deserves to be the focus of research in terms of the study's variables so that the relationship of these variables in this population can be known.

Lastly, this study fills some gaps in the knowledge base of Hispanic MSM, especially those MSM who are of Cuban origin. Very few research studies could be located that focused on Cubans. In terms of depressive symptoms, self-esteem, and sexual behaviors, only two studies could be located that focus on depressive symptoms (depression) in Cubans (Foreman, 1985; Llorente, Eisdorfer, Loewenstein & Zarate, 1996). Studies that examine depressive symptoms, self-esteem, and sexual behaviors in Cuban MSM are non-existent. In this sense, this study provides some insight of these variables within the context of the Cuban MSM population.

Policy

Nurses need to be involved in policy development at all levels of government to ensure that members of this population receive adequate health care and services. On the national level, nurses need to advocate for funding allocated to HIV and STD testing and counseling services as well as mental health services. This funding could be utilized to

cover costs of testing sites and for providing both medical and psychological care for members of this population as well as the community at-large. With the steady increases in the new HIV infection rates (Centers for Disease Control and Prevention, 2005), as well as the increased prevalence of major depressive disorder in the US (Hasin, Goodwin, Stinson, & Grant, 2005), advocating for increased funding for these services is imperative.

On the federal and state level, nurses need to advocate for preventative services. Preventative services include primary, secondary and tertiary prevention services. As primary prevention effort have not consistently decreased HIV infection rates in this population, nurses need to be more active in examining primary prevention strategies in order to make them more effective in decreasing HIV transmission in this population. In addition, nurses need to take an active role in tertiary HIV prevention. Although this concept has been discussed in the literature, putting this concept into clinical practice is not as developed as primary HIV and STD prevention strategies (Hughes, 2003).

Theoretical Implications

The results of this study have theoretical implications in terms of testing the concepts of the Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998) with MSM. Noting the relationship of the model's concepts and where the study's variables fit into the concepts, the strength of these relationships can be tested using Pearson's product-moment correlation coefficients (*r*), as described in Chapter Four.

Based on the Pearson's product-moment correlations, significant relationships were not noted between depressive symptoms and self-esteem (r= .143, p= .041) and depressive symptoms and sexual behaviors (r= -.144, p= .039). Significant relationships

were noted between depressive symptoms and a few of the demographic variables of education (r= .186, p= 0.01) and language preference (r= .137, p= 0.05); self-esteem and length of time in the US (r= .509, p= 0.01); and sexual behaviors and length of time in the US (r= .509, p= 0.01). The remaining demographic variables were not significantly correlated with the study's major variables.

This allows this researcher to evaluate the Flaskerud and Winslow (1998) model with this population. Although not all variables were significantly correlated with the major study variables, this model was appropriate to use as the study's theoretical framework since all the study's variables were easily identified in the model's concepts. In addition, the direction of the relationships between variables in the model is supported by the correlation coefficients although statistical significance is lacking. To test further the strength relationships of this study in the Vulnerable Populations Conceptual Model, structural equation modeling (SEM) could be conducted. SEM is used to measure the theoretical concepts by examining the measurement of the theoretical model, which gives the researcher an idea of the fit of the measurement model to the data (Munro, 2001).

Research

The findings of this study have contributed to the body of existing knowledge on depressive symptoms, self-esteem, and sexual behaviors in MSM. This study makes a unique contribution to the knowledge base of this population in that a large percentage (78.5%, n=175) of the MSM in this study are members of ethnic minorities; were foreign born (68.8%; n=141), and that a significant amount of the men (33.7%; n=69) had CES-D scores greater than 16 which is indicative of higher levels of depressive symptoms. Since very few studies that focus on MSM have such a high percentage of men who are

members of ethnic minorities, this study's findings make a significant contribution to the knowledge base.

Since few studies have examined the relationship between the study's variables, this study has implications for further research. For example, future studies with this population may examine knowledge, attitudes, and beliefs about HIV/AIDS and mental health issues within this population. Other psychosocial factors such as intimate partner violence, substance use, social stigma, and acculturation could be explored to determine if there is a relationship between these factors and depressive symptoms, self-esteem, and sexual behaviors in this population.

Another aspect that needs to be explored with further research with this population involves factors that influence participation in high-risk sexual behaviors despite knowledge of the risk for HIV infection. MSM were one of the original high-risk groups for HIV infection in the early 1980's (Centers for Disease Control and Prevention, 2005). Early in the epidemic, MSM responded to the educational prevention messages that were targeted to this population (Shilts, 1987). Recent evidence, however, suggests that a resurgence in the infection rates of this population may be occurring in MSM (Centers for Disease Control and Prevention, 2005). Factors that contribute to this resurgence are unclear at present. Qualitative research studies would be useful in this situation to identify which factors may influence high risk versus safer sexual behaviors in MSM. Triangulation methodology could be employed to gain an in-depth perspective of the relationships of these factors by combining both quantitative and qualitative techniques.

Intervention studies could also be conducted with this population. For example, this study could be expanded and could be conducted in other parts of the country. Interventions that encourage safer sexual behaviors and promote mental health could be tested to determine if the behavior changes in terms of sexual behaviors and mental health issues continue longitudinally. Testing of these interventions via experimental research designs would add more credibility to the study's findings. These intervention studies could be conducted in collaboration with other disciplines outside of nursing so that multidisciplinary research collaboration can occur.

More research needs to be conducted with ethnic minority MSM. This sub-population of MSM faces additional challenges related to racial and possibly socioeconomic disparities. This sub-population of MSM would need to have studies designed and conducted that are culturally sensitive and culturally congruent with the sub-population being studied. For example, fewer studies are available that focus on Hispanic MSM. For the researcher who is interested in studying this population, the research instruments need to be available in both English and Spanish. The researcher should be familiar with Hispanic culture and in an effort to be culturally sensitive to the population being studied, the researcher should attempt to have a member of this ethnic group available as a member of the research team.

If this study were to be replicated, a few additional variables should be included. These variables would include a measure of HIV knowledge, a self-report of the participants' HIV status, and some measure of the participants' perceived risks for HIV infection. These variables, which are related to the study's major variable of sexual behaviors, might provide even more insight into this population. For example, if

participants do not have adequate knowledge of HIV and its transmission, participants may not know how to protect themselves from becoming infected. Participants' HIV status may also influence sexual behaviors (perhaps even depressive symptoms and self-esteem). If participants are HIV-infected, it would be hoped that these clients would participate in higher levels of safer sex behaviors in order to prevent transmission of the virus to others and to prevention re-infection with another strain of HIV. Lastly, it would be interesting to know how participants' perceived risk of HIV infection might influence sexual behaviors. It would seem that those who perceive themselves to be at risk for HIV infection would participate in safer sex behaviors. In contrast, those who do not perceive themselves to be at risk may participate in unsafe sex behaviors, which may place them at risk for HIV infection. Of course, the influence of these variables on sexual behaviors can not be known unless they are studied in this population.

Summary of Chapter V

The purpose of this study was to determine the relationship of depressive symptoms, self-esteem, and sexual behaviors in urban MSM. Information obtained in this study can provide some insight into the mental health issues and sexual behaviors that are specific to the population of MSM. This information obtained from this research study could be useful in designing culturally sensitive nursing interventions tailored to this population. Flaskerud and Winslow's (1998) Vulnerable Populations Research Model provided the theoretical framework for studying the study's major concepts.

The results of this study provide knowledge of the characteristics and variables that have a relationship or have an influence on urban MSM's sexual behaviors. These findings should be used to assess, plan, implement, and evaluate prevention and

educational strategies to halt the spread of HIV infection in this population, and to address the mental health needs of this population. Future research studies could build on these findings of this study or this study could spawn other related research on this population.

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Appendix A: Permission to use the Vulnerable Populations Model

It's OK with me to use the vulnerable populations model for your study. You should know however that the model has changed since it was published in 1998. The model is the foundation for our Center for Vulnerable Populations Research. We changed the model in 2000 and again in 2004 based on additional data and testing of the model. I'll send you slides with a new diagram and explanation of the model and also a work sheet that our faculty and research fellows use to operationalize the model.
Your population – gay men and ethnic minorities - are in accord with our definition of vulnerable populations. However, the way your research question is posed does not appear to be using the model correctly. The model would propose that LACK OF RESOURCES (e.g.,income, education, minority status, etc) increases RELATIVE RISK (e.g. unprotected sexual behavior, lowered self-esteem) which in turn would predict HEALTH STATUS (e.g., depression).
From the studies conducted at our center the most powerful predictor of health status is almost always poverty. Ethnic minority status also turns up as a predictor variable but that is because poverty and ethnicity so often coincide. The fact that poverty affects Hispanics and African Americans more than whites tends to "muddy" the relationship with poverty but it's always there. The young men you're talking about carry an added burden of stigma because of their sexual preference but if you would include white gay men in your study, and especially middle class white gay men you would find that the poverty/ethnicity variable plays a strong card.
I'm not suggesting that you add white men but I wanted you to know what a powerful influence poverty plays in the model.
Good luck with your research.
Jackie Flaskerud

> [Original Message]
> From: Karen Taka <ktaka@sonnet.ucla.edu>
> To: <jflasker@earthlink.net>
> Date: 3/16/05 8:28:12 AM
> Subject: fax
>> Hi Jackie,
>> You got a fax yesterday...
> It's from Joseph De Santis, MSN, ARNP
> a PhD student in Nursing at Barry University in Miami Shores
>> His study is examining the impact of depression and self-esteem on
> the sexual behaviors of Hispanic and African-American men who
> have sex with men. He is using your Vulnerable Popualtions
> Conceptual model.
>> He is wondering if you will grant him permission 1) to use your
> model in his study; and 2) to reproduce your model in his
> dissertation. He is willing to share the results of his study if you
> would grant his this permission. If you are willing to grant this
> permission, he would you to send him a letter to the address below
> or to his email. Joseph DeSantis 300 NW LeJeune Road #211
> Miami, FL 33126jdesantis@um-jmh.org

> Karen Taka
> UCLA School of Nursing
> 3-653 Factor
> 10833 LeConte Avenue
> Los Angeles, CA 90024-6917 310-825-6892

Appendix B: The Center for Epidemiological Studies-Depressed Mood Scale (CES-D) in English and Spanish

Center for Epidemiological Studies-Depressed Mood Scale (CES-D)

(Note: This instrument is in the public domain and does not require permission to use this instrument)

Instructions: Using the scale below, please circle the number before each statement which best describes how you felt or behaved this way during the past week.

1=Rarely or none of the time (less than 1 day)
2=Some or a little of the time (1-2 days)
3=Occasionally or a moderate amount of time (3-4 days)
4=Most or all of the time (5-7 days)

During the past week:

1 2 3 4 I was bothered by things that usually don't bother me.
1 2 3 4 I did not feel like eating; my appetite was poor.
1 2 3 4 I felt that I could not shake off the blues even with help from my family or friends.
1 2 3 4 I felt that I was just as good as other people.
1 2 3 4 I had trouble keeping my mind on what I was doing.
1 2 3 4 I felt depressed.
1 2 3 4 I felt that everything I did was an effort.
1 2 3 4 I felt hopeful about the future.
1 2 3 4 I thought my life has been a failure.
1 2 3 4 I felt fearful.
1 2 3 4 My sleep was restless.
1 2 3 4 I was happy.
1 2 3 4 I talked less than usual.
1 2 3 4 I felt lonely.
1 2 3 4 People were unfriendly.
1 2 3 4 I enjoyed life.
1 2 3 4 I had crying spells.
1 2 3 4 I felt sad.
1 2 3 4 I felt that people dislike me.
1 2 3 4 I could not get "going."

SCORING: The scoring of positive items is reversed (item 4, 8, 12, and 16). Possible range of scores is zero to 60, with the higher scores indicating the presence of more symptomatology.

Instrucciones: Usando la escala que esta debajo, por favor circule el numero que esta delante de cada declaracion que mejor describa como usted se sintio o como se comporto durante la semana pasada.

1= Rara vez o nunca (menos de 1 dia)
2= Algunas veces o un poco. (1- 2 dias)
3= Ocasionalmente o una cantidad de tiempo moderada (3-4 dias)
4= La mayoria o todo el tiempo (5-7 dias)

Durante la semana pasada:

1 2 3 4	Cosas que usualmente no me molestan me molestaron.
1 2 3 4	No me senti con deseos de comer, mi apetito fue muy poco.
1 2 3 4	Me senti que no podia salir de la depresion incluso con la ayuda de mi familia o amigos.
1 2 3 4	Me senti que yo era tan bueno como los demas.
1 2 3 4	Tuve difficultad en concentrarme en lo que estaba haciendo.
1 2 3 4	Me senti deprimido.
1 2 3 4	Senti que todo lo que hacia era un esfuerzo.
1 2 3 4	Me senti lleno de esperanzas acerca del futuro.
1 2 3 4	Pense que mi vida ha sido un fracaso
1 2 3 4	Me senti lleno de miedo.
1 2 3 4	Mi sueño fue sin descanso
1 2 3 4	Me senti feliz.
1 2 3 4	Hable menos de lo usual
1 2 3 4	Me senti solo
1 2 3 4	La gente no era amigable.
1 2 3 4	Disfrute de la vida
1 2 3 4	Estuve llorando mucho
1 2 3 4	Me senti triste
1 2 3 4	Senti que no le gustaba a la gente
1 2 3 4	No pude continuar con mi tren de vida

Appendix C: The Rosenberg Self-Esteem Scale (RSE)

In English and Spanish

Rosenberg Self-Esteem Scale

INSTRUCTIONS:
Below is a list of statements dealing with your general feelings about yourself. If you agree strongly with the statement, circle 1. If you agree with the statement, circle 2. If you disagree with the statement, circle 3. If you strongly disagree with the statement, circle 4. (*=reversed scored items. * will not be on the survey.)

1=Strongly agree
2=Agree
3=Disagree
4=Strongly disagree

1. On the whole, I am satisfied with myself.
1 2 3 4

2. *At times I think I am no good at all.
1 2 3 4

3. I feel that I have a number of good qualities.
1 2 3 4

4. I am able to do things as well as most other people.
1 2 3 4

5.*I feel I do not have much to be proud of.
1 2 3 4

6.*I certainly feel useless at times.
1 2 3 4

7. I feel that I'm a person of worth, at least on an equal plane with others.
1 2 3 4

8.*I wish I could have more respect for myself.
1 2 3 4

9.*All in all, I am inclined to feel that I am a failure
1 2 3 4

10. I take a positive attitude toward myself.
1 2 3 4

INSTRUCCIONES:

Debajo hay una lista de declaraciones que tienen que ver con sentimientos acerca de ti mismo de forma general. Si estas de acuerdo completamente con la declaracion circula el numero 1. Si estas de acuerdo con la declaracion circula el numero 2. Si no estas de acuerdo con la declaracion circula el numero 3. Si estas en desacuerdo completamente circula el numero 4.

1= Completamente de acuerdo
2= De acuerdo
3= Desacuerdo
4= Completamente desacuerdo

1- De forma general, estoy satisfecho conmigo mismo.
1 2 3 4

2- A veces pienso que soy un bueno para nada.
1 2 3 4

3- Siento que tengo unas cuantas buenas cualidades.
1 2 3 4

4- Soy capaz de hacer las cosas tan bien como la mayoria de la gente.
1 2 3 4

5- Siento que no tengo mucho de lo que sentirme orgulloso.
1 2 3 4

6- Ciertamente, a veces me siento inutil.
1 2 3 4

7- Siento que soy una persona que vale, al menos en igual plano que otros.
1 2 3 4

8- Quisiera poder tener mas respeto por mi mismo.
1 2 3 4

9- Sobre todo me inclino a pensar que soy un fracaso.
1 2 3 4

10- Tomo una actitud positiva hacia mi mismo.
1 2 3 4

The Morris Rosenberg Foundation
c/o Dept. Of Sociology University of Maryland
2112 Art/Soc Building
College Park, MD 20742-1315

March 13, 2005

To Whom It May Concern:

This is to inform you, as you requested, that I will be using the Rosenberg Self-Esteem Scale as one of my research instruments in my doctoral dissertation at Barry University in Miami Shores, Florida. My doctoral dissertation is entitled "The Effects of Depression and Self-Esteem on the Sexual Behaviors of Urban Men."

I can be contacted at the enclosed address.

Sincerely,

Joseph De Santis
PhD Student, Barry University
300 NW LeJeune Road, # 211
Miami, FL 33126
Home: 305-444-2987
Email: Jdesantis@um-jmh.org

Appendix D: The Safe Sex Behavior Questionnaire (SSBQ)

in English and Spanish with Author's Permission to Use Instrument

SAFE SEX BEHAVIOR QUESTIONNAIRE (SSBQ)

Directions: Below is a list of sexual practices. Please read each statement and respond by indicating **your degree of use of these practices.**

1 = Never 2 = Sometimes 3 = Most of the Time 4 = Always

1. I insist on condom use when I have sexual intercourse.
   1 2 3 4

2. I use cocaine or other drugs prior to or during sexual intercourse.
   1 2 3 4

3. I stop foreplay long enough to put on a condom (or for my partner to put on a condom).
   1 2 3 4

4. I ask potential sexual partners about their sexual histories.
   1 2 3 4

5. I avoid direct contact with my sexual partner's semen or vaginal secretions.
   1 2 3 4

6. My partner and I use spermicide as well as a condom with each act of sexual intercourse.
   1 2 3 4

7. I have sexual intercourse with someone who injects drugs (IV drugs) into his/her veins.
   1 2 3 4

8. I ask my potential sexual partners about a history of bisexual/homosexual practices.
   1 2 3 4

9. I engage in sexual intercourse on a first date.
   1 2 3 4

10. I abstain from sexual intercourse when I do not know my partner's sexual history.
    1 2 3 4

11. I avoid sexual intercourse when I have sores or irritation in my genital area.
    1 2 3 4

12. If I know an encounter may lead to sexual intercourse, I carry a condom with me.
    1 2 3 4

13. I insist on examining my sexual partner for sores, cuts, or abrasions in the genital area.
    1 2 3 4

14. If I disagree with information that my partner presents on safer sex practices, I state my point of view.
    1 2 3 4

1 = Never 2 = Sometimes 3 = Most of the Time 4 = Always

15. I engage in oral sex without using protective barriers such as a condom or rubber dam.
1 2 3 4

16. I use rubber gloves for sexual foreplay when I have cuts or abrasions on my hands.
1 2 3 4

17. If swept away in the passion of the moment, I have sexual intercourse without using a condom.
1 2 3 4

18. I engage in anal intercourse.
1 2 3 4

19. I ask my potential sexual partners about a history of IV drug use.
1 2 3 4

20. If I know an encounter may lead to sexual intercourse, I have a mental plan to practice safer sex.
1 2 3 4

21. If my partner insists on sexual intercourse without a condom, I refuse to have sexual intercourse.
1 2 3 4

22. I avoid direct contact with my sexual partner's blood.
1 2 3 4

23. It is difficult for me to discuss sexual issues with my sexual partners.
1 2 3 4

24. I initiate the topic of safer sex with my potential sexual partner.
1 2 3 4

25. I have sexual intercourse with someone who I know is a bisexual or gay.
1 2 3 4

26. I engage in anal intercourse without using a condom.
1 2 3 4

27. 1 drink alcoholic beverages prior to or during sexual intercourse.
1 2 3 4

Instrucciones: Debajo hay una lista de practicas sexuales. Por favor lea cada declaracion indicando el grado en que usted usa estas practicas.

1= Nunca 2= Algunas veces 3= La mayoria de las veces. 4=Siempre

1. Insisto en usar condom cuando tengo contacto sexual.
   1 2 3 4

2. Uso cocaina u otras drogas antes o durante el contacto sexual.
   1 2 3 4

3. Paro las el juego presexual lo suficiente para ponerme el condom (o para que mi compañero se ponga el condom).
   1 2 3 4

4. Le pregunto a mis probables compañero(a)s acerca de sus encuentros sexuales anteriores.
   1 2 3 4

5. Evito el contacto directo con el semen o las secreciones vaginales de mi compañero (a).
   1 2 3 4

6. Mi compañero (a). y yo usamos espermicida como tambien usamos condom en cada acto del contacto sexual.
   1 2 3 4

7. Tengo contacto sexual con alguien que se inyecta drogas (drogas tipo IV) en sus venas.
   1 2 3 4

8. Le pregunto a mi compañero (a) acerca de su historia de practicas bisexuales o homosexuals.
   1 2 3 4

9. Tengo contacto sexual en la primera cita.
   1 2 3 4

10. Me abstengo de tener contacto sexual cuando no conozco la historia sexual de mi compañero (a).
    1 2 3 4

11. Evito contacto sexual cuando tengo llagas o irritacion en mis genitales.
    1 2 3 4

1= Nunca 2= Algunas veces 3= La mayoria de las veces. 4=Siempre

12. Si se que un encuentro me pueda llevar a tener contacto sexual , llevo un condom.
    1 2 3 4

13. Insisto en examinar a mi compañero (a) sexual para ver si tiene llagas, cortadas o irritacion en sus genitales.
    1 2 3 4

14. Si estoy en desacuerdo con alguna informacion que mi compañero (a) presenta acerca de las practicas de sexo seguro, yo presento mi punto de vista.
    1 2 3 4

15. Participo en sexo oral sin usar brarreras protectoras tales como condom o una barrera de latex.
    1 2 3 4

16. Uso guantes de goma para el juego presexual cuando tengo cortadas o irritaciones en mis manos.
    1 2 3 4

17. Si me dejo llevar por la pasion del momento, tengo contacto sexual sin usar un condom.
    1 2 3 4

18. Participo en contacto sexual anal.
    1 2 3 4

19. Le pregunto a mis probables compañero(a)s sexuales acerca de su historia de drogas tipo IV.
    1 2 3 4

20. Si se que un encuentro me pueda llevar al contacto sexual, tengo un plan mental de practicar sexo seguro.
    1 2 3 4

21. Si mi compañero(a) insiste en tener contacto sexual sin condom, rehuso a tener contacto sexual.
    1 2 3 4

22. Evito el contacto directo con la sangre de mi compañero(a) sexual.
    1 2 3 4

23. Es dificil para mi discutir temas sexuales con mis compañero(a)s sexuales.
    1 2 3 4

1= Nunca 2= Algunas veces 3= La mayoria de las veces. 4=Siempre

24. Inicio el tema del sexo seguro con mi probable compañero(a) sexual.
    1 2 3 4

25. Tengo contacto sexual con alguien que yo se es bisexual o gay.
    1 2 3 4

26. Participo en contacto sexual anal sin el uso del condom.
    1 2 3 4

27. Tomo bebidas alcoholicas antes o durante el contacto sexual.
    1 2 3 4

-----Original Message-----
From: Regina Daniel [mailto:rmdanie@sph.emory.edu]
Sent: Monday, May 03, 2004 11:51 AM
To: Jdesantis@um-jmh.org
Subject: Fw: SSBQ

Dear Mr. De Santis,
You have Dr. DiIorio's permission to use the attached SSBQ in your research.
Good luck with your research. Regina Daniel, Ass't to Dr. DiIorio
> ----- Original Message -----
> From: "De Santis, Joseph" <Jdesantis@um-jmh.org>
> To: <cdiiori@sph.emory.edu>
> Sent: Monday, April 26, 2004 3:48 PM
> Subject: SSBQ
>
>
> > Hello Dr. DiIorio:
> >
> > My name is Joseph De Santis and I am a PhD student at Barry University
in
> > Miami Shores, FL. I am also an active member of ANAC. For my
> dissertation,
> > I am interested in looking at depression, self-esteem, and sexual
> practices
> > of minority MSM. From looking at the DiIorio, Parsons, Lehr, Adame &
> Carlone
> > (1992) article, I think that the SSBQ would be a good tool to measure
> safe
> > sex behaviors in these men, however, I can not seem to locate a copy of
> the
> > tool. Could you tell me where I can locate a copy of this tool?
> >
> > thanks, Joe De Santis
> >
> > Joseph De Santis, MSN, ARNP
> > HIV/Bloodborne Pathogens Educator/Coordinator
> > Jackson Health System
> > 305-585-7996
> >
> >---------- Headers ----------
Return-Path: <Jdesantis@um-jmh.org>
Received: from rly-yh06.mx.aol.com (rly-yh06.mail.aol.com [172.18.180.70]) by air-
yh03.mail.aol.com (v100.23) with ESMTP id MAILINYH33-79040ffdfcd33b; Thu, 22 Jul 2004
11:40:11 -0400
Received: from jmhex02.um-jmh.org ([170.134.222.95]) by rly-yh06.mx.aol.com (v100.23) with
ESMTP id MAILRELAYINYH62-79040ffdfcd33b; Thu, 22 Jul 2004 11:39:58 -0400
Received: by jmhex02.um-jmh.org with Internet Mail Service (5.5.2653.19)
id <PHJR41LJ>; Thu, 22 Jul 2004 11:36:53 -0400
Message-ID: <57905412178DD5119CBA00034772FF55055F8404@jmhex02.um-jmh.org>
From: "De Santis, Joseph" <Jdesantis@um-jmh.org>
To: "'jdesantismiami@aol.com'" <jdesantismiami@aol.com>
Subject: FW: SSBQ
Date: Thu, 22 Jul 2004 11:36:43 -0400
MIME-Version: 1.0
X-Mailer: Internet Mail Service (5.5.2653.19)
Content-Type: multipart/mixed;

Appendix E: Demographic Questionnaire

1) How old are you? _____

2) What is your ethnicity?
   1) African-American
   2) Caucasian
   3) Hispanic
   4) Other

3) In which country were you born? _____

4) How many years have you lived in the United States? (If born in the US, write 0) _____

5) Are you employed
   0) unemployed
   1) full time (at least 40 hours per week)
   2) part time (less than 40 hours per week)

6) What is your source of income?
   1) employment
   2) disability
   3) government assistance
   4) family support

7) What is your total income in US dollars per year? _____

8) Are you in an intimate relationship?
   0) No
   1) Yes

9) What is your highest level of education?
   1) I did not complete high school.
   2) I completed high school.
   3) I completed two years of college (Associate's degree)
   4) I completed four years of college (Bachelor's degree)
   5) I completed a master's degree.
   6) I completed a doctorate degree.

1) Que edad tiene? _____

2) Cual es su etnia?
   1) Afro-americano
   2) Caucasico
   3) Hispano
   4) Otro

3) En que pais nacio? _____

4) Por cuantos años has vivido en los Estados Unidos? (Si ha nacido en los Estados Unidos escriba 0) _____

5) Esta usted empleado?
   0) Desempleado
   1) Tiempo completo (al menos 40 horas semanales)
   2) Medio tiempo (menos de 40 horas semanales)

6) Cual es su fuente de ingresos?
   1) empleo
   2) desabilitado
   3) ayuda del gobierno
   4) mantenido por un familiar

7) Cual es su ingreso total en dolares estadounidenses al año? _____

8) Tiene usted un relacion intima?
   0) No
   1) Si

9) Cual es su grado de escolaridad mas alto?
   1) No complete el bachillerato
   2) Complete el bachillerato
   3) Complete dos años de college .
   4) Complete cuatro años de college.
   5) Complete una maestria
   6) Complete un doctorado.

Appendix F: Recruitment Poster




Urban Men's Health Study

Recruiting urban men who have sex with men age 18 or older who reside in Miami-Dade county to participate in a research study conducted by a doctoral student at Barry University School of Nursing. Receive two (2) free Lotto® "scratch off" tickets for participating.

Se necesitan hombres que tengan sexo con otros hombres de 18 años o más y que residan en el condado de Miami-Dade para participar en un estudio de investigación conducido por un estudiante de Doctorado de la Escuela de Enfermería de la Universidad Barry. Reciba dos (2) tickets del raspadito de la Lotto® gratis por participar.

For more information and to participate in this study, please contact:
Para más información y para participar, por favor llamar a:

Joseph De Santis at 786-399-2248

Appendix G: Cover Letter to Participants

Barry University
Cover Letter

May, 2005

Dear Research Participant:

Your participation in a research project is requested. The title of the study is "The Effect of Depressive Symptoms and Self-esteem on the Sexual Behaviors of Urban Men." The research is being conducted by Joseph De Santis, a student in the Ph.D. in Nursing at Barry University School of Nursing, and is seeking information that will be useful in the field of health issues in urban men. The aims of the research are to find out if depressive symptoms and self-esteem influence sexual behaviors. In accordance with these aims, the following procedures will be used: I will ask you to complete a questionnaire that asks you questions about depressive symptoms, self-esteem and your sexual behaviors. I anticipate the number of participants to be approximately 250.

If you decide to participate in this research, you will be asked to do the following: spend about 30 minutes completing an anonymous questionnaire that asks you questions about depressive symptoms, self, esteem, and sexual behaviors.

Your consent to be a research participant is strictly voluntary and should you decline to participate or should you choose to drop out at any time during the study, there will be no adverse effects to you.

The risks of involvement in this study are minimal and include the possibility that you may feel uncomfortable, embarrassed, or anxious in answering questions about depressive symptoms, self-esteem or sexual behaviors. The following procedures will be used to minimize these risks: if at any time you feel uncomfortable with the questions, stop the questionnaire and notify the researcher. In addition, if these feelings of discomfort and anxiety are identified, the researcher will refer you for counseling services. Although there are no direct benefits to you, your participation in this study will help our understanding of how depressive symptoms and self-esteem might have an effect on sexual behaviors.

As a research participant, information you provide will be kept anonymous, that is, no names or other identifiers will be collected on any of the instruments used. Data will be kept in a locked file in the researcher's office.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Joseph De Santis, at (305) 444-2987, my supervisor, Dr. Jessie M. Colin, PhD, RN, at (305) 899-3830, or the Institutional Review Board point of contact, Ms. Avril Brenner, at (305) 899-3020.

Thank you for your participation.

Sincerely,

Joseph De Santis, MSN, ARNP
Ph.D. in Nursing Student,
Barry University

Barry University
Cover Letter

Mayo, 2005

Estimado participante:

Se require su participación en un proyecto de investigación. El título del estudio es: " El efecto de los sintomas de depresión y la autoestima en la conducta sexual de los hombres urbanos(hombres que viven en una ciudad) ". La investigación está siendo llevada a cabo por Joseph De Santis, un estudiante de Doctorado en Enfermería de la Universidad Barry, este estudio está buscando información que sea útil en el campo de los problemas de salud de los hombres urbanos. Los objetivos de esta investigación son encontrar si la depresión y la autoestima influyen en la conducta sexual. De acuerdo con estos objetivos, los procedimientos siguientes serán usados: Le pediré que complete un cuestionario con preguntas acerca de depresión, autoestima y de su conducta sexual. Anticipo que el número de participantes será de 250.

Si usted decide participar en esta investigación, lo siguiente le será requerido: pasar cerca de 30 minutos completando un cuestionario anónimo con preguntas acerca de depresión, autoestima y de conducta sexual.

El consentimiento a ser un participante de esta investigación es estrictamente voluntario y usted puede negarse a participar o puede elegir salirse de la investigación en cualquier momento sin que esto lo afecte de alguna manera.

Los riesgos de involucrarse en este estudio son mínimos e incluye la posibilidad de que usted se pueda sentirse incomodo, avergonzado o ansioso de contestar preguntas acerca de depresión, autoestima ó conducta sexual. Los procedimientos siguientes seran usados para minimizar estos riesgos: si en algún momento usted se siente incómodo con las preguntas pare de responder y hagale saber al investigador. Además si los sentimientos de incomodidad y ansiedad son identificados, el investigador lo referirá a un consejero. Aunque no hay beneficios directos para usted, su participación en este estudio nos ayudará a entender como la depresión y la autoestima podrían tener un efecto en la conducta sexual.

Como participante de la investigación, la información que usted proporcione será mantenida de forma anónima, ningún nombre u otra identificación seran recogidas en ninguno de los instrumentos utilizados. Los datos seran mantenidos en un archivo cerrado en la oficina del investigador.

Si usted tiene alguna pregunta o interés acerca del estudio o su participación en el mismo, me puede llamar a mi, Joseph De Santis, al (305) 444-2987; a mi supervisora Dr. Jessie M. Colin, PhD, RN al (305) 899-3830; o al Institutional Review Board con Ms. Avril Brenner, al (305) 899-3020.

Gracias por su participación.

Atentamente,

Joseph De Santis, MSN, ARNP
Estudiante de Doctorado en Enfermería.
Universidad Barry

If you feel uncomfortable, embarrassed, or anxious after answering questions about depressive symptoms, self-esteem or sexual behaviors, you can call:

Ida Perez, MSW at 305-243-8009 **OR**

Mercedes Rodriguez, MSN, RN at 305-585-7447

Si usted siente incomodo, avergonzado o ansioso de contestar preguntas acerca de sintomas de depresión, autoestima ó conducta sexual, usted puede llamar:

Ida Perez, MSW at 305-243-8009 **O**

Merecedes Rodriguez, MSN, RN at 305-585-7447

Appendix H: Barry University Institutional Review Board Approval Letter

Approval letter here

Appendix I: Vita

February 19, 1965	Born-Morgantown, WV

EDUCATION

1988	B.S.N., West Virginia University Morgantown, WV
1994	M.S.N., Medical University of South Carolina, Charleston, SC
1999	Post-MSN Certificate, Florida International University, Miami, FL

PROFESSIONAL WORK EXPERIENCE

1988	Staff Nurse, Ruby Memorial Hospital, Morgantown, WV
1990	Staff/Chief Nurse, MUSC Children's Hospital, Charleston, SC
1993	Instructor of Nursing, Trident Technical College, Charleston, SC
1994	Clinical Nurse Specialist, Miami Children's Hospital, Miami, FL
2000	Pediatric Nurse Practitioner, University of Miami Department of Pediatric Infectious Diseases & Immunology, Miami, FL
2003	Educator, Communicable Disease Control, Jackson Health System, Miami, FL

PUBLICATIONS

De Santis, J.P. (1997). Cultural brokerage as a nursing intervention: A case study. *The Florida Nurse: Official Bulletin of the Florida Nurses' Association, 45*(8), 5.

Vega, A.I., De Santis, J.P**.,** & Rheinbolt, K. (2002). Enteral feedings: Meeting nutritional needs of children with HIV. *Advance for Nurses, 3*(2), 31, 35.

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