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Effects of Medical Professionals' Communication with Men Sleeping With Men and HIV/AIDS

Dawne D. Dickerson
Walden University

Walden University

College of Health Sciences

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Dawne D. Dickerson

has been found to be complete and satisfactory in all respects,
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Review Committee
Dr. Vasileios Margaritis, Committee Chairperson, Public Health Faculty
Dr. Kelley Sams, Committee Member, Public Health Faculty
Dr. Simone Salandy, University Reviewer, Public Health Faculty

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Abstract

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by

Dawne D. Dickerson

MS, Walden University, 2012

BS, Pennsylvania State University, 2010

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

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Abstract

The human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) initially emerged in the 1980s and ever since, a battle has been underway with regard to understanding some of the root issues attributed to behavior and HIV/AIDS. AIDS is prevalent in the men sleeping with men (MSM) community. There is lack of studies evaluating the quality and quantity of communication between MSM and medical professionals, which can be a catalyst to help reduce HIV/AIDS within this community. The aim of this quantitative study was to evaluate the relationship between quantity and quality of medical professionals' communication and regular HIV screening and testing, as well as modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors, controlled for race/ethnicity, educational level, and income. Universal precautions theory and health belief model were the theoretical framework of this study. A total of 126 MSM were evaluated via survey research. Chi-square analysis revealed that MSM who have ever visited a medical professional about HIV/AIDS were tested in significantly higher frequency compared with those that did not visit medical professional for this reason (51.5% vs. 18.5%, respectively, $p < .001$). Also, significantly more participants changed their sexual behavior during the last 5 years and considered that the approach of the medical professional contributed in this change, compared with those who changed their sexual behavior but did not consider this approach helpful (73.7% vs. 26.7%, $p < .001$). This research can provide positive social change to the MSM community as well as medical professionals, by encouraging MSM to seek more information pertaining to safe sexual health practices, prevention, and awareness.

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Dedication

I would like to dedicate this dissertation to all of the individuals living with, caring for, and loving an individual (s) with HIV/AIDS. Having several family members who suffered, and passed away from AIDS, I understand, empathize, and identify with individuals coping with someone who suffers from this lethal disease. My thoughts, prayers, and encouragement are with you.

Acknowledgments

I would like to thank and acknowledge all my friends and family that supported me through this long journey of creating a platform that I hope will one day benefit and inspire my loved ones, as well as my community. I pray that people, especially women and young girls, and more importantly minority women and young girls, see that there is no limit to their dreams and aspirations in life.

I would first like to thank my husband Talvin, for supporting me through every class, test, chapter, and defense. I would also like to thank my immediate family, for providing a loving, caring and supportive environment. And a special thank you to my mother for being the example and role model that she is, by allowing me to believe that African American women can have and do it all!

I would also like to thank my committee for their hard work and dedication, getting me to this point. Dr. Angela Prehn and Dr. Kelley Sams, thank you so much. I would like to especially thank my chair Dr. Vasileios Margaritis. From the initial connection, you have created a calming peace over this process, and have put me at ease when I was unsure of myself. Thank you for being funny, caring, and direct. You made me feel as though I was more than just a student, but a person, who you know and care for, and who’s best interest was your greatest intent. You have truly been an inspiration and a great encouragement, and I would not be here without you.

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Chapter 1: Introduction to the Study

Background Information

HIV/AIDS has come a long way since its emergence in the United States in the 1980s. HIV Pioneers such as Dr. Jonathan Mann and Randy Shilts helped provide a better understanding to the lethal disease. Jonathan Mann was the Director of the World Health Organization’s (WHO’s) Global Program on AIDS, a multifaceted global program with a budget that exceeded all the rest of WHO’s non-AIDS budget. Furthermore, Randy Shilts was an author of a book that mobilized interest in the effects of AIDS on the gay community at an important and sociologically transitional time (Collins, 2014). Dr. Mann was not only important to the science behind the disease, but the social stigma associated with the disease (Collins, 2014). Dr. Mann brought to light, the more significant issue of a social stigma, which needed solving, in addition to solving the viral disease.

In this dissertation, I discuss the behaviors of *men who sleep with men* (*MSM*). This term was used to broaden the inclusion of both men who consider himself homosexual, and men who do not consider himself a homosexual male, but does engage in anal and/or oral intercourse with other men. The perpetuation of health care and provider stigma has created a barrier between MSM who have contracted HIV, or have potential to be exposed to HIV (Jin, Earnshaw, Wickersham, et al., 2014). According to the study conducted by Jin et al., (2014) prospective health care providers (medical and dental students) demonstrated a malice attitude towards HIV infected individuals as well as MSM, opposed to general patients. Poor provider attitude and patient mistrust due to stigma is again supported by Eaton et al. (2014), who conducted a study providing results that 29% of Black MSM participants reported racial and/or sexual orientation discrimination, and 48% of his participants reported medical mistrust. This attitude is one of the factors that can foster a provider stigma that is felt by MSM.

Beyrer et al. (2013) discussed the effect of the HIV infection and how it affects MSM globally. The authors found that HIV disproportionately affects MSM, especially in the Western hemisphere. Beyers et al. (2013) cited that Black males had a 48% increase in new HIV infections. This is due to the fact that HIV infected individuals are made up largely of either MSM or intravenous drug users (IDUs).

Social stigma and racial discrimination play a large part in provider mistrust and fear of judgment among MSMs. From a racial aspect, Black MSM are the most HIV-affected population in the United States (Eaton et al., 2014). This is supported by statistics stating that Black MSM are 44% more likely to contract new HIV infections, and the rate of infection is 7.9 times higher than their White MSM counterparts (Eaton et al., 2014). Socially, African American MSM face more disparities than their Caucasian counterparts including, socioeconomic, educational, and health disparities. According to (Xanthos, Treadwell, & Holden, 2010), African American males disproportionately suffer from poor health for reasons including poor individual health, and poor social and environmental factors.

Parsons et al. (2012) discuss the breakdown of HIV prevalence using systems such as the CDC’s National HIV Behavioral Surveillance System (NHBS) and the Metropolitan Statistical Areas (MSAs). The article states that in 2008 HIV prevalence among MSM was at 19%. Of the 19%, 44% were unaware of their infection. Individuals who were aware of his status often had better medical care and better preventative services.

Meanwhile, Frye et al. (2015) pointed out how discrimination among MSM, sexual orientation and race play a significant role in HIV/AIDS risk behaviors. Frye et al. noted that the risk of HIV/AIDS is associated with a lack of communication between MSM and medical professionals. Frye et al. claimed that medical professional stigma is associated with adverse health behaviors which translate to poor health outcomes.

Social stigma is feared not only because of the men's sexual preference, but also due to their recreation activity choices. Greene et al. (2012) discussed how substance-using MSM also participate in unprotected vaginal and/or anal intercourse, resulting in the increase of the risk to contract HIV/AIDS. Although the proportion of substance-using MSM who also have sex with women is low, these men engage in unprotected sex with women, particularly with primary female partners (Greene et al., 2012). Lacking sexual history and sexual encounter disclosure among sexual partners has contributed to the spread of the disease (Kerr et al., 2013).

Although MSM are in fear of stigma from health professionals, they should be receiving help from, the easiest resolve would be to encourage more engagement on both ends. Eaton et al. (2015) discussed the need for routine health care engagement among African American MSM (although this article solely discusses the engagement between African American MSM, this conversation is very pertinent to all MSM). Although there are many advancements in HIV/AIDS medicine and research, the communication and engagement between medical professionals and MSM must take place. Eaton et al. also notes the limitations involved in medical professional and MSM communications which include, but are not limited to, being insured or uninsured, insurance providers and services based on financial needs, socioeconomic status, and more.

Problem Statement

MSM are disproportionately affected by HIV/AIDS (Van Griensven, Willem de Lind van Wijngaarden, Baral, & Grulich, 2009). Per Greene et al. (2013), 61% of new HIV diagnosis were credited to MSM intercourse. This partly attributed to the lack of HIV testing MSM receive due to fears of medical professional shunning due to his lifestyle choices (Parsons, Grov, & Golub, 2012). Edelman et al. (2014), state that MSM feel that high-risk behaviors attributing to HIV/AIDS stem from provider stigma of homosexuality.

The gap in knowledge I addressed is whether would benefit from more and better quality engagement and communication efforts from medical professionals. There is currently information available regarding effectively conveying the issues related to HIV risks, awareness, and prevention to their MSM patients; however, evaluating the quality and quantity of communication may be a catalyst to help reduce HIV/AIDS within this community and there is lack of studies on this subject. Effective, quality, communication includes openness, trust, and availability, which are imperative to the communication between the two parties, because not only is the lack of conversation important but the tone and environment for the conversation to occur is just as important. According to Edelman et al. (2014), "[*Communications*] may be improved through improving provider understanding of the complexities for MSM regarding sexual risk behaviours and disclosure and transcending barriers to trusting relationships between MSM and providers" (p. 1,888).

MSM may feel intimidated and ostracized by the insensitivity of physicians and medical professionals. Edelman et al. (2014) provided an example of a provider's insensitivity and lack of emotional intelligence when he/she explained his/her perspective on HIV in MSM being attributed to sexual promiscuity. The medical professional tells the author that the MSM that come into contact do not want to disclose how many partners he may have to conceal his promiscuity. The medical professional later equates all men to dogs. Belanoff, Tetu, and Mayer (2007) stated that some of the barriers to HIV screening among MSM include confusion regarding the way STDs are transmitted, lack of education regarding signs and symptoms of HIV/AIDS, and supposed weaknesses stemming from the health care system (including the lack of provider sensitivity).

Although the quality of communication is important, it means nothing if this information is not reinforced. The quantity of times and efforts made to address MSM patient about HIV/AIDS prevention makes a difference in limiting the patient's risk. Per the American Family Physician (2015), medical professionals should offer adult patients HIV testing at a minimum of once a year, but the organization encourages testing more than once a year, in addition to assessing the patient's risk of HIV. The attempts made to discuss HIV/AIDS should not be limited to how many times a year testing is offered, but it should be extended to the initial attempt to provide testing, providing information about counseling depending upon the individual's results, information about false-negative and false-positive results and the importance of retesting, and information regarding the window of time antibodies can be detected (American Family Physician, 2015).

Purpose of the Study

My purpose was to evaluate the potential effects of medical professionals' communication with MSM and how it affects the spread of HIV/AIDS. Edelman et al. (2014) stated that MSM feel that high-risk behaviors attributing to HIV/AIDS stems from provider stigma of homosexuality. In this dissertation, I can help demonstrate a need for a better relationship between medical professionals and MSM. Explaining the importance of communicating information regarding risks, awareness, and prevention of HIV/AIDS to MSM to stop the spread of the disease in this population is imperative and provides MSM with positive reinforcement to take better precautionary measures regarding his sexual health. In addition, there are some mediating variables attributed to the lack of communication, such as race/ethnicity, educational level, and income. However, when medical professionals open themselves up to dialogue in favor of promoting awareness and prevention, they provide a line of communication and trust toward people in the MSM community. Edelman et al. stated that improving provider understanding of homosexual complexities is necessary to transcend barriers of trust among MSM and providers.

Research Questions and Hypotheses

RQ1: Is medical professional communication (assessed via survey by examining quality versus quantity of this communication) associated with regular HIV screening and testing (assessed by survey) in MSM in New York City area (NYC), controlled for race/ethnicity, educational level, and income?

H_01_a: Medical professional communication (assessed via survey by examining quality versus quantity of this communication) has no association with regular HIV screening and testing (assessed by survey) in MSM in New York City area (NYC), controlled for race/ethnicity, educational level, and income?

H_A1_a: Medical professional communication (assessed via survey by examining quality versus quantity of this communication) is associated with regular HIV screening and testing (assessed by survey) in MSM in New York City area (NYC), controlled for race/ethnicity, educational level, and income?

RQ2: Does medical professional communication (assessed via survey by examining quality versus quantity of this communication) have an influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors (i.e. lack of condom use, multiple sexual partners, drug use), controlled for race/ethnicity, educational level, and income, to limit the spread of the disease as much as possible?

H_01_a: Medical professional communication (assessed via survey by examining quality versus quantity of this communication) has no influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors (i.e. lack of condom use, multiple sexual partners, drug use), controlled for race/ethnicity, educational level, and income, to limit the spread of the disease as much as possible?

$H_{A}1_{a}$: Medical professional communication (assessed via survey by examining quality versus quantity of this communication) have an influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors (i.e., lack of condom use, multiple sexual partners, drug use), controlled for race/ethnicity, educational level, and income, to limit the spread of the disease as much as possible?

Theoretical and/or Conceptual Framework of the Study

Part of the data on this topic deal with the behaviors and actions of MSM with regard to sexual intercourse and evaluating what else can be done regarding HIV prevention and breaking down communication barriers. In an article written by Edelman et al. (2014), the authors stated that HIV stigma amongst MSM provides insecurities that are related to high-risk behaviors such as substance abuse and multiple sexual partners as a coping mechanism. The use of the health belief model (HBM) (this model is supported by the use of Universal Precautions (United States Department of Labor, R.D. 2017) theory attempts to explain and predict health behaviors (University of Twente, 2012). The assumption behind the HBM is that a person will comply with health-related actions including the use of condoms, self-masturbation, and/or abstinence if that person:

1. Feels that a negative health condition (i.e., HIV infection) can be avoided.
2. Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., using condoms will be effective at reducing the likelihood of HIV infection).

3. Believes that he can successfully take a recommended health action (i.e., he/she can use condoms comfortably and with confidence) (University of Twente, 2012).

Nature of Study

The nature of this study consists of quantitative survey research using a cross-sectional study design. I used online questionnaires to obtain the study information. The quantitative data were analyzed using bivariate and multivariate analyses. In this study, the RQ1 has an independent variable, level of communication, and as dependent variables screening, testing, and other preventative measures. The control variables included race/ethnicity, educational level, and socioeconomic status. In the RQ2, the control variables are still race/ethnicity, educational level, and socioeconomic status; further, the independent variable is again the level of communication and the dependent variables were high-risk HIV behaviors.

All participants were sexually active males who identified as MS and they were 18 years and older. The search for prospective patients was with flyers, posters, social media outlets, and word of mouth. Once potential participants were identified, they were asked to complete an informed consent process before completing a survey via SurveyMonkey.

Once participants agreed to participate, via the informed consent, additional information about the study survey and inclusion and exclusion criteria were presented. For this study, i required an evaluable population of patients for study start. The number of study participants required was determined by a power formulation calculated after evaluating the total number of interested male participants (more information on the sample size in Chapter 3). More than 100,000 New York residents have HIV, and of that, 68% are MSM (GHMC, 2017). This study entailed a questionnaire styled survey, questioning numerous patients.

Definitions

Communication between MSM and health providers: Information regarding prevention and/or awareness on HIV/AIDS provided from Health Providers to MSM to benefit the livelihood of MSM and reduce the risk of HIV/AIDS.

Health provider: An individual who provides treatment in the medical industry, a medical physician with a D.O. or M.D. degree; someone who has an extensive medical background and/or academic knowledge in HIV/AIDS and by trade provides this information to the public.

HIV stigma: The manner in which stigma is portrayed or experienced by a HIV-positive individual (Earnshaw & Chaudoir, 2009).

HIV-positive: An individual having had a positive result in a blood serum test for the HIV virus (dictionary.com, 2018).

Standard of care: The level of which the provider in a practice would practice; a treatment process that a provider should follow for patient illness and circumstances (MedicineNet, 2018).

Assumptions

An important assumption that I made was that physicians would recognize that can play a significant role to control his/her stigma towards MSM and MSM who may have or have been exposed to HIV/AIDS. This assumption is important because without acknowledgement of the problem, there can be no resolve, or attempt to resolve, the situation. According to Eaton et al. (2015), African American MSM described experiences with health care providers and services offered as “subpar.”

I also assumed that all MSM identify with their sexuality when providing discrete, secured information. However, this assumption is untrue and is important to the data because not all men who have any form of sexual intercourse with another male deem themselves as an MSM. Durso and Meyer (2013) acknowledged that bisexual men (39.3%) are less likely to disclose their sexual orientation to health care providers. Some of the reasons sighted for the lack of disclosure aside from provider stigma are age, level of education, level of internalized homophobia, level of connectedness to the LGBTQ community, and medical history (Durso & Meyer, 2013).

I also assumed that the validity of the questionnaire and whether or not the participants will answer honestly and with minimal recall bias. *Bias* is defined as deviation of results or inferences from the truth, or processes to such deviation (Hassan, 2006).

Scope and Delimitations

In terms of scope, I used a survey to evaluate MSM behaviors and self-reported HIV prevalence. I evaluated adults MSM (aged 18 years and older), willing to consent to participating in the study, have had sexual intercourse (anal or oral) with another man within the last 12 months, may or may not be HIV positive, have had communication with a health care or medical professional regarding sexual health, HIV, or AIDS within the last 5 years, and have English reading ability. Although MSM are afraid of societal stigma, stigma from medical professionals significantly affects the MSM community. Eaton et al. (2015) correlated experiencing stigma from medical professionals with a longer lapse of time between examinations and preventative check-ups. Additional forms of personal engagement that are important in the communication gap are as follows: medical providers may not ask about personal interests due to lack of time, or their own insecurities of proper decorum when communicating with a homosexual individual, which creates a feeling of not wanting to be bothered or stigma (Mimiaga et al, 2007).

In addition, this survey addressed how sexual-identity is a secondary factor in the increased rate of HIV/AIDS in MSM. Mimiaga et al. (2007) stated that MSM are reluctant to disclose sexual orientation to medical providers due to the fear of breaches in medical confidentiality that might affect them adversely.

Limitations

One of the limitations involved in this study was bias. There may be information bias provided by subjects who are afraid to be honest regarding his sexual history. Patients may not want to disclose sexual intercourse with other men, especially if this is not a lifestyle that is known to most in their surrounding circles. However, with this being an anonymous study taken at the participant’s leisure, and hopefully in the comfort of his own privacy, this will help negate those urges. In addition, an exaggeration of experience may occur. A subject may feel slighted by a past experience with a provider and provide an exaggerated truth hoping that it will provide closure to the hurt or damage he felt from his encounter. Hopefully exaggeration was limited due to more objective questions being asked, and less open-ended questions being incorporated into the survey.

Other limitations of cross-sectional studies are that they lack control over countering arguments, which make it difficult for the researcher to make unambiguous inferences (Frankfort & Nachmias, 2008). Another limitation is that researchers cannot manipulate the independent variable, so the direction of causation must be inferred (Frankfort & Nachmias, 2008). This can, however, be negated by using multivariate analysis because it explores the relationship amongst multiple variables concurrently. It does so by focusing on more than one outcome (dependent variable) and more than one predictor (independent variable) at the same time.

Significance of the Study

This study can be significant, because it may show that better lines of communication between medical providers and MSM can significantly reduce the risk of HIV/AIDS within the MSM community. Although a plethora of HIV/AIDS prevention information is readily available, statistics show that gay and bisexual men account for 53% (this is different from Greene's finding of 61%, but the difference may be attributed to the time gap of these findings stemming from 2006) of the estimated new HIV diagnoses in the United States (Parsons et al., 2012). Gay and bisexual men have been disproportionately affected by the HIV virus since the inception in the United States; however, despite numerous medical advancements such as pre-exposure prophylactic (PrEP) and highly active antiretroviral therapy (HAART), the MSM community still lags behind in decreasing their HIV incidence rates (Parsons et al, 2012).. This suggests that the successes of medical advances may have diminished and deterred-concerns regarding

HIV infection within the younger members of the MSM community who are too young to have been around during the early HIV/AIDS pandemic (Greene et al, 2012).

This dissertation can have some significant social change implications, because it will reveal how the quality and quantity of the communication between health professionals and MSM impact sexual health behaviors of MSM. In addition, MSM will be able to feel confident confiding in his medical providers and providing a medical trust that is nonexistent. By providers engaging with MSM more frequently, they will not only gain the trust of MSM, but be able to affect his medical history by getting the patient to come in more frequently, and ultimately resulting in a declining HIV/AIDS rate within this community. Medical professional engagement should not be limited to patient encouragement, but the medical professional should also encourage the patient's partner to participate in prescreenings and testing (American Family Physician, 2015). Proactive awareness will either deter decisions that would link to the contraction of HIV/AIDS or make intervention (the next step) easier. The patient will trust the medical professional in either case.

Summary

The objective of this dissertation was to help demonstrate a need for a better relationship between healthcare providers and MSM. Communicating information regarding risks, awareness, and prevention of HIV/AIDS to MSM to stop the spread of the disease in this population is crucial to this community because it provides positive reinforcement. With this reinforcement, the hope is for MSM to take better precautionary measures regarding his sexual health. In Chapter 2, I will reiterate the purpose and problem statement of this study, as well as a detailed literature review on the subject, and theoretical and conceptual framework.

Chapter 2: Literature Review

Introduction

The influence of medical professionals' communication with MSM and HIV/AIDS was my focus in this study. It has become an increasingly large issue with the rapid spread of sexually transmitted diseases in this community. Per the CDC (2013), the majority of newly diagnosed HIV cases were composed of MSM. This community is experiencing a burden of prevalence due to numerous factors including but not limited to health literacy, ethnicity, and socioeconomics. The CDC (2013) supports this claim by stating that lack of awareness of HIV status, unprotected anal intercourse, and increased viral loads among HIV-positive men are contributing factors. These factors are preventable with improved health literacy of the spread of HIV/AIDS. I used the HBM theory to explain and predict health behaviors (University of Twente, 2017).

Literature Search Strategy

My literature search strategy consisted of using Walden's library and searching through ProQuest. In addition, I used Google Scholar. For further research, the reference list from articles previously read to find additional, related articles. The keywords that I searched to find these articles were *men sleeping with men, HIV/AIDS, healthcare provider stigma towards MSM, healthcare provider stigma and MSM, quality of healthcare amongst MSM, and HIV stigma and healthcare providers, medical professional communication, HIV screening and testing, MSM in New York City, high-risk behaviors attributing to HIV/AIDS MSM behaviors MSM and race/ethnicity, MSM and educational level,* and *MSM and income.*

I also searched terms such as *universal precautions* and *health belief model* to find articles on my theoretical framework. These terms are not mutually exclusive; therefore, a secondary search was conducted for the content related to these terms. Once again, Google Scholar, ProQuest, and Walden's library were the primary sources for finding articles related to these topics.

My search was limited to the United States and/or other first world nations including Canada, with similar practices as the United States or equivalent medical standard of care or better. To be considered a first world country, the country must be a stable economy with a high standard of living and be a capitalistic U.S.-allied country (Andrews, 2018). Similar practices include, but are not limited, to societal views, medical treatment execution, and types of provider and/ or standard of care for individual patients. The references that I used were also limited to articles and peer-reviewed papers. There is a plethora of information available on HIV/AIDS and the disease and some articles can date as far back as 30 years or more. To keep the information relevant and current, articles were generally used if they were from 2013 or earlier, to make sure that the most up to date information was being provided.

Theoretical Foundation

The research that I conducted in this study evaluated MSM behaviors and how lack of medical professional communication with MSM contributes to HIV prevalence. Although MSM may fear societal stigma, stigma from medical professionals has a severe impact on the MSM community. Eaton et al. (2015) correlated experiencing stigma from medical professionals with a longer lapse of time between examinations and preventative check-ups. Unfortunately, if there is a lack of medical examination and screenings, there is a lack of dialogue between MSM and medical professionals, which creates a gap in preventative measures and providing proper awareness via the medical professional to the MSM. To reduce the lapse of time between visits or create a feeling of bias or stigma, additional forms of personal engagement between MSM and medical professionals are important; otherwise, medical providers' efforts to not pry or become too personal with the MSM may come off in a negative manner creating a miscommunication with a homosexual individual, which creates a feeling of not wanting to be bothered or stigma (Mimiaga et al, 2007).

The term *stigma* is important to the individual's psyche and how he is portrayed amongst others. Stigma also determines people's self-worth, which can alter a MSM's approach to sexual intercourse and whether his actions are carried out in a thoughtful manner or a risky manner. Garcia et al. (2015) stated that MSM, particularly African American MSM, use internalized homophobia and HIV stigma, in a manner that negatively affects his health, by feeling a lack of self-efficacy which creates a need to not take preventative measures such as using prophylactics.

Universal Precautions

Universal precautions are an approach to control and combat the spread of infection, usually transmitted via blood or other bodily fluids (U.S. Department of Labor, 2017). Semen and vaginal secretions contribute to the sexual transmission of HIV/AIDS (CDC, 1988). With regard to MSM and MSMW sexual transmission, universal/standard precautions would include the practice of abstinence, self-masturbation, and condom (both male and female) usage. The use of condoms during sexual intercourse for protection from blood and bodily secretions is as important as health care workers using gloves to protect him/herself from blood and bodily secretions while working.

Health Belief Model

The HBM is a concept that focuses on an individual's attitudes and beliefs about a specific event. The HBM was created in the 1950s by social psychologists working on public health platforms, and initially created for failed response rates to tuberculosis (University of Twente, 2017). However, the same initiative was able to be applied to multiple diseases, including HIV/AIDS. The core assumptions of the HBM are:

1. Feeling that a negative health condition (i.e., HIV) can be avoided.
2. Has a positive expectation that by taking a recommended action, he/she will avoid a negative health condition (i.e., using condoms will be effective at preventing HIV), indented the same as a paragraph indent.
3. Believes that he can successfully take a recommended health action (i.e., he/she can use condoms comfortably and with confidence) (University of Twente, 2017).

With these assumptions also come several other parts to the health belief model: perceived threat (susceptibility and severity), perceived benefit, perceived barriers, cues to action, and self-efficacy (University of Twente, 2017). Perceived threat is broken into two parts of how the health condition will affect the individual. The first is perceived susceptibility, which is the individual's viewpoint of how he will contract the disease, and severity is the individual’s feelings regarding the severity of contracting HIV/AIDS, and any possibilities/consequences that come along with the disease being untreated (University of Twente, 2017). Perceived benefit is one’s assumption of how efficacious the suggested remedy or action to reduce the risk of disease will affect the individual. Perceived barriers are the tangible and intangible obstacles one will face when he tries to use the suggested advice provided. Lastly, self-efficacy is the confidence he has in himself to follow through with the actions necessary to avoid HIV/AIDS.

The health belief model is crucial to this dissertation because it discusses MSM’s ability to “successfully take recommended health action”, however, that cannot occur without conversation between MSM and medical professionals. The lack of dialogue between the two groups may explain why although MSM only represent seven percent of the US population, it accounts for 78 percent of new HIV infections in males (Schnall, Travers, Rojas, Carballo-Dieguez, 2014). It is public knowledge that the use of prophylactics and better, abstinence, are the safest methods to minimize or diminish (respectively) any chances of contracting HIV/AIDS, however the use of the health belief model and implementing these procedures is not always the primary method to avoid contraction of the disease.

The HBM is currently used in public health forums to promote awareness and prevention for HIV/AIDS in programs and platforms such as “Doing It”, a campaign used to encourage testing in individuals aged 16-64; and “Start Talking. Stop HIV.”, which encourages gay and bisexual men testing, condom use, and medicinal treatments (HIV.gov, N.D.). The HBM has been applied in several studies related to HIV/AIDS.

One study, conducted by Schnall, Travers, Rojas, Carballo-Dieguez, (2014) indicated that using methods such as HBM are productive for short term response to reducing risks of contracting HIV/AIDS. The study concluded that by using such methods, risk behaviors (i.e. use of condoms, self-masturbation, and abstinence) and were decreased, and HIV/AIDS testing increased (Schnall, Travers, Rojas, Carballo-Dieguez, 2014).

Literature Review

Quality and Quantity of Communication Between MSM and Physicians

When it comes to communication between physicians and MSM, the impact of the communication is what matters in order to minimize the risk of HIV/AIDS. MSM want to feel that his opinion matters, as well as know that his medical provider has a genuine, vested interest in his health. According to (Flickinge, Saha, Moore, & Beach, 2013) qualities such as trust, and feeling that the provider knows you as an individual are not only important to MSM but are associated with antiretroviral therapy adherence. These qualities are key components that help measure the quality of communication between physicians and MSM. However, the quantity of times the physician and MSM communicate can’t be ignored, because the amount of times together equates to building a healthy, informative, and trustworthy relationship.

Quality communication can mean several different things to several different individuals. However, in this dissertation, we will describe what “better communication” means on a physician level, and then expand outwards to how that connects with the MSM community. In a Tom Lee interview, he went in great detail about how renowned physician, Adrienne Boissy, MD, MA, Chief Experience Officer of Cleveland Clinic

Health System, breaks down communication improvement. Dr. Boissy begins by stating that physicians need to be able to expose his/her ‘conscious incompetence’ otherwise, there is no room for a willingness to learn or improve his or her abilities (Boissy & Lee, 2017). She continues by stating that physicians also need to identify with communication challenges that continue to be a recurring theme for most physicians (Boissy & Lee, 2017).

While Dr. Lee and Dr. Boissy provided direct factors that physicians should explore to improve him/herself individually, King and Hoppe (2013) identify direct factors that can impact physician/MSM communication, including:

1. Fostering the relationship,
2. Gathering information,
3. Providing information,
4. Making decisions,
5. Responding to emotions, and
6. Enabling disease and treatment related behavior (King & Hoppe, 2013, 385)

When this effort is not put into the level of communication between the physicians and MSM, patients are left feeling confused, neglected, and unsure. This is supported by the interview between Dr. Lee and Dr. Boissy, when Dr. Boissy shows physicians his/her low patient comment scores, providing he/she with a jarring epiphany of how patients genuinely feel about their physician/patient interaction (Boissy & Lee, 2017).

Not only does the quality of physician and MSM interaction have a significant role in physician/patient interaction, it also plays a major role in patient retention. Missed appointments contribute to a lack of proper treatment including antiretroviral therapies, which is the best support currently available to HIV/AIDS patients (Horberg et al., 2013). When an MSM patient does not deem that his provider has a genuine concern for his wellbeing, he will not frequent his visits. Missed visits are essentially associated with poor health, and eventually death, due to the disease. (Horberg et al., 2013) supported this statement by indicating that missed visits were the largest contributing factor for mortality.

In a study conducted by Flickinge, Saha, Moore, & Beach, (2013), MSM patients kept more appointments with their physicians when physicians treated them with dignity and respect, listened to the patient’s needs and concerns, explained terminology in laments terms, and recognized the individual on a personal level. Feeling a connection with one’s provider resonates with MSM not only because he feels valued, but because it makes the individual want to come back and obtain as much knowledge as possible and want to engage in awareness and prevention. This is supported by Flickinge, Saha, Moore, & Beach, (2013) because when MSM patients lack this sort of care, up to 30 percent of appointments are missed and the retention rate of the MSM patients falls under 60 percent.

While the quality of communication is significant to fostering a better impact via communication, the quantity of times a physician sees a patient helps foster the relationship, which was a key component of communication mentioned above. The quantity of communication is important because repetitive and reiterative information helps MSM patients retain the information and the patient. Horberg, Hurley, Silverberg, Klein, Quesenberry, & Mugavero (2013) state that the first-year worth of visits, post HIV-diagnosis is crucial to establishing successful retention. Additionally, the quantity of times a physician sees their patients allows the MSM to build a report with the physician and helps void any feeling of alienation and disingenuity.

The reason quality and quantity of visits is important, is because it stimulates a relationship between the MSM and physicians which provides a better line of communication, health and understanding amongst both parties. (Flickinger, Saha, Moore, & Beach, 2013) indicate in their study that patients who receive quality and consistent healthcare treatments, respond better. Their analysis concluded that patients kept more provider visits for treatment when they felt that they were treated fairly, with respect, the provider listened to his needs and concerns, information was explained thoroughly, and the physician was familiar with the patient.

Attributing Variables

When it comes to the communication gap between physicians and MSM, there are several layers that influence this gap. These factors include but are not limited to several types of HIV screening and MSM behaviors including lack of condom use, multiple sexual partners, drug use. There are several types of HIV screenings: antibody tests, antibody/antigen tests, and nucleic acid tests (NATs) (U.S. Department of Health and Human Services, 2018). Antibody HIV tests are the most common form of testing and can be done as a blood test or orally (U.S. Department of Health and Human Services, 2018). In order for an antibody test to produce the HIV antibodies must be present for at least three to 12 weeks (U.S. Department of Health and Human Services, 2018). The next type of testing is the combination testing of antibodies and antigens (parts of the virus) (U.S. Department of Health and Human Services, 2018). This test is important because it's quicker and can detect the HIV virus before the antibody test could, only needing two to six weeks within the person's immune system (U.S. Department of Health and Human Services, 2018). And lastly, NATs can be found via the individual's blood and can be detected within seven to 28 days of infection.

While there are several types of screenings, there has been a decline in HIV testing amongst the MSM population. Although there is little exploration as to why this is the case, studies such as Mitchell and Horvath (2013) indicate that trust, age, and education, played a major role in MSM receiving HIV testing. This dissertation can help fill the void of the unknown by examining if increased physician interaction and communication would encourage more frequent testing. According to the American Family Physician (2015) medical professional engagement should not be limited to patient encouragement, but the medical professional should also encourage the patient's partner to participate in pre-screenings and testing.

Another contributing factor is MSM behaviors. MSM behaviors that contribute to the spread of HIV include lack of condom use, multiple sexual partners, and illicit drug use. The exchange of bodily secretions has been a well-known form of HIV/AIDS contraction for over three decades (HIV.gov, N.D.). However, the use of prophylactics in MSM sexual encounters has been on the decline. (Paz-Bailey, Mendoza, Finlayson, Wejnert, Le, Rose, … Prejean, 2016) suggests that limited promotion of condoms, increasing access to condoms, and the advancement of antiretroviral therapy (ART) is the reason behind less condom usage. Additionally, multiple sexual partners are a risk factor in contracting the disease. HIV.gov (N.D.) suggests that by reducing the number of sexual partners, an MSM can reduce his chance of coming into contact with a partner that has the virus that is not suppressed.

The other attributing factor is illicit drug use. Illicit drug use is closely connected with contracting HIV and other sexually transmitted diseases (Center for Disease Control and Prevention, 2018). According to the CDC (2018), the most common drugs associated with risky sexual behaviors include: alcohol, opioids, methamphetamine, crack cocaine, and inhalants. The dangers of drug use and sexual activity, especially with MSM, is that individuals under the influence are willing to exhaust all of his resources, including sexual favors in order to obtain the next high (CDC, 2018).

While there have been initiatives and incentives such as intervention programs, biomedical development programs, and 330 million dollars donated annually to health departments, there are still challenges being faced in regards to MSM contracting HIV due to illicit drug use (CDC, 2018). Some of these prevention challenges include: health and social needs, stigma, lack of immediate access to healthcare, and lack of adherence treatments (CDC, 2018). Health and social needs of illicit drug users generally include poverty, high unemployment rates, homelessness, and scenarios of extreme violence (CDC, 2018). The lack of healthcare connects the remaining issues of treatment adherence and health stigmas. MSM patients that cannot afford to be treated or see his physician will not be provided with proper care, will not be able to ask additional or follow up questions regarding his disease or treatments, and will not be able to build a report with his medical provider. Hence, creating a further communication gap between physicians and MSM.

Influences on the Attributing Factors

While, HIV screenings and MSM behaviors are attributing factors of the communication gap between MSM and physicians, race, education, and socioeconomic status are the underlining influences behind these factors. From the inception of America, the foundation that White men were superior to all was not only a founding, fundamental value for economic or political power, but it influenced healthcare and medical/scientific agendas. “From the 1600s, the oppression of Americans of color has been systemic and rationalized using a white racial framing with its constituent racist stereotypes, ideologies, images, narratives, and emotions,” (Feagin & Bennefield, 2014, 7).

Race/Ethnicity

For centuries, many of African Americans were viewed as ‘test dummies’ for medical advances without proper explanation; and once this became public knowledge, it placed an enormous wedge of trust between medical providers and the African American community. According to (Armstrong, Putt, Halbert, Grande, Schwartz, Liao, …, Shea, 2013) African Americans have a higher rate of medical distrust due to a greater burden of racial discrimination. Historically, African Americans were treated as second class citizens in all walks of American life, however, healthcare was no stranger to that mistreatment. It is evident that race and ethnicity play a part in the communication gap because African Americans are leading the prevalence of HIV/AIDS. African Americans are estimated to have 44 percent of all new HIV infections among adults and adolescents (aged 13 years or older) in 2010, despite representing only 12-14 percent of the US population (CDC, 2013).

Examples of provider mistrust exists commonly and subtly and are often times not reported. The gap of communication between African Americans and physicians is further strained by previous experiences of past injustices such as the Tuskegee Syphilis Study (Armstrong et al, 2013). The infamous Tuskegee Syphilis Study refers to numerous black males whom were known to have been diagnosed with syphilis, but were mistreated and provided inaccurate information regarding "medical attention and help" they received, causing further illness and death in many of the patients from a timespan from 1932-1972 (CDC, 2017). This careless act risked and ended the lives of numerous innocent men due to ill will and neglect on behalf of the treating physicians and study team members. This incident was one of many not only in the United States, but all over the world that made public health officials and medical officials aware of the dangers being placed on participating patients. To add insult to injury, these atrocities were not publicly acknowledged until former President Clinton apologized for them in 1997 (almost 50 years post the experiment) (CDC, 2017). This intrusion created a huge divide and lack of trust in the African American community with any medical physicians.

While the Tuskegee Syphilis Study was an example of why there is a communication and trust disconnect between African Americans and physicians, the HIV/AIDS pandemic affects African Americans at a disproportionate rate than his

Caucasian counterparts, leaving a feeling of perpetuation of lack of care amongst the African American community. “Compared with other races and ethnicities, African Americans account for a higher proportion of HIV infections at all stages of disease—from new infections to deaths,” (CDC, 2013). One contributing factor is the African American community has a history of diminishing the need to receive regular checkups and visit the doctor frequently partly due to cultural reasons, partly due to lack of trust that physicians truly have his/her best interest. Armstrong et al, (2013) discusses how physicians provided African Americans lower rates of recommendations for disease prevention and treatment of acute and chronic diseases. This used to come from a pride and stigma issue, in addition to most African Americans not being able to afford healthcare. Many African Americans also suffer from a high rate of HIV/AIDS because there is a homophobic stigma placed on the African American community. According to Hill (2013), many African American MSM are torn between an estrangement from his African American community, and fear of alienation if he denies his sexual preference from his LGBTQ (lesbian, gay, bisexual, transgender, and queer) community.

While African-Americans tend to have the most affected population of people with HIV/AIDS, Hispanics are becoming the next heavily populated group to mask this disease. As of 2010, Hispanics had new diagnoses of HIV infection occurring at an annual rate of 2.8 times that of non-Hispanic whites (An, Hernandez, Prejean, German, Thompson, & Hall, 2012). The rate of prevalence was broken down into different categories. It was reported that in Puerto Rico and the Northeast of the 46 states in the US, most infected patients were infected due to intravenous drug use; while in the

Southern region of the 46 states in the US, new cases of infected patients were affected because of male-to-male sexual intercourse (An et al, 2012).

It is hypothesized that there is a direct correlation between these findings and their origins. An et al. (2012) suggests that since most of the Northeastern Hispanic population is of Puerto Rican decent, the correlation between Puerto Ricans in Puerto Rico and Puerto Rican in the US suffering from HIV due to drug use supports a commonality of a drug disease in that culture (An et al, 2012). While the root of HIV in Puerto Ricans stems primarily from drug use, the Southern regions of the US (predominantly of Mexican decent) are infected because of male-to-male sexual intercourse. It is proposed that due to migration and immigration of many younger men, they are being influenced in a social manner that leads them to sexual events with other males (An et al, 2012).

Education

Another attributing factor towards the gap of communication is education of the disease and poor health literacy. Many Americans do not have a strong sense of health literacy although he (in regards to this dissertation MSM) may be literate. Literacy is the ability to read, write, and comprehend. Health literacy is being able to retain, understand, and process information regarding basic health needs and the services needed to make conscious health decisions (U.S. Department of Health and Human Services, N.D.).

Medical providers and public health officials have become an important factor of health literacy because both medical providers and public health officials use various resources such as assessments to help understand the level of health literacy one obtains and use that to provide education in areas individuals are lacking health literacy. Higher health literacy levels allow for greater impact in an MSM’s communication with physicians because it allows him to navigate through the system, understand important information such as health and family health history, as well as advocate for himself due to the understanding of health concepts and risks (U.S. Department of Health and Human Services, N.D.).

Low health literacy can influence the actions of public health officials and medical provider communication because it allows health officials to understand where the lack of knowledge exists and it provides a platform for research, education and awareness. Majority of the time physicians are the first line of interaction about a disease. However, on average American patients only spend about an hour per year in the doctor’s office (CDC, 2009). This means that doctors have roughly one hour per year to correctly inform patients about health literacy pertaining to his/her disease.

In regards to health literacy and MSM and HIV/AIDS, there is a low level of health literacy regarding the spread of HIV/AIDS in the MSM community. An example of poor health literacy is emphasized in an article by Williams & Sallar (2010), that discussed the individuals in the Jackson and Delta, Mississippi area. The demographic was adult, African American, men who lived in an urban or rural area. Majority of these individuals’ socioeconomic status was either at or below the poverty level, and roughly 13 percent of the 466 population had completed a college level education and about 41 percent had not finished high school (Williams & Sallar, 2010). The study used survey analysis to showcase the low literacy rate (Williams & Sallar, 2010). An example of the MSM’s poor health literacy on HIV/AIDS was participants of the study indicating that over 21 percent of the participants maintained that ‘they can tell by looking at a person if he or she has HIV or AIDS,’ (Williams, Sallar, 2010). Therefore, this demonstrates the low level of health literacy within the MSM community.

Socioeconomic Status

And the last of the attributing factors is socioeconomic status. Socioeconomic status is considered an attributing factor of communication between MSM and physicians, because, MSM with lower socioeconomic status face obstacles such as not being able to afford to pay for provider visits. This is supported by the CDC (2017) which stated that current trends indicate that in urban, poverty-stricken areas, lower income equated to greater risk of HIV prevalence. Socioeconomic status play a crucial role of neglect in the healthcare industry. Health disparities exist amongst people of a specific ethnicity and/or socioeconomic status (Jones, 2010).

When it comes to physician communication, socioeconomic status is often a determining factor of an MSM’s health because the MSM may not be able to afford the visit (Getzen, 2013). Individuals who can afford health insurance make the effort to invest in preventative care and take care of illness at onset. However, individuals who cannot afford health insurance suffer because the expense of medical attention is considered a luxury. Reasons behind why specifically young, Black, MSM may face socioeconomic challenges may stem from school failure or early termination of school, lack of transitional resources to the workforce following graduation, or the inability to maintain consistent employment that provides options such as health benefits (Gayles et al., 2016).

Per (Gayles et al., 2016) lower socioeconomic status is significantly associated with HIV status. Unfortunately, that means people of a higher socioeconomic status have the privilege of taking advantage of better healthcare services and tending to their healthcare needs; whereas, a MSM of a lower socioeconomic stature has less advantages and control over his life and lifestyle because engaging in healthy activities, preparing healthier meals, taking mental health days for relaxation and rejuvenation, and having access to the best of treatments when need be is unimaginable due to his economic disadvantages. In particular (Gayles, et al., 2016) found that young, Black, MSM were the most disadvantaged of the socioeconomic group.

This creates a problem for both the physicians and MSM because the uninsured, underinsured, and medically underserved create greater expenditures since they enter the health system at advanced stages of diseases and in weakened conditions (Laureate Education Inc., 2012). Economic disadvantages wedge a further gap between the physicians and MSM because the communication cannot occur due to fault of neither side, but lack of resources to foster the communication needed to occur between the two parties. With economic barriers, both physicians and MSM patients are at a loss.

Summary

Understanding the communication gap between MSM and medical professionals means understanding the root of MSM's behaviors and beliefs. In this dissertation, the use of the Health Belief Model will help examine the theoretical framework. The Health Belief Model is a concept that focuses on an individual's attitudes and beliefs about a specific event (i.e. HIV/AIDS) (University of Twente, 2017). While understanding the theoretical framework behind the communication gap is important, understanding how the medical providers are communicating is equally important.

Analyzing the quality and quantity of communication makes for a better tool of gaging the needs of communication. In this dissertation, quality was first assessed by understanding physician weakness and how the improvement of his/her weakness could better assist MSM in understanding preventative and treatable methods (Boissy & Lee, 2017). Quality communication was further broken down with the following characteristics: fostering the relationship, gathering information, providing information, making decisions, responding to emotions, and, enabling disease and treatment related behavior (King & Hoppe, 2013, 385). The quality of communication directly ties with the quantity of communication, because as stated, fostering relationships comes with multiple attempts of communication.

Unfortunately, there is communication gap between medical professionals and MSM, which is associated with how MSM seek regular HIV screening and testing and how he behaves. The forms of HIV screenings that MSM may choose from include: antibody test which are the most common, antibody/antigen test, and NATs which can determine results within 28 days (U.S. Department of Health and Human Services, 2018). The testing and screening is imperative to knowing his status, however, MSM behaviors are a direct reflection of these screenings.

The behaviors that are deemed risky and may negatively impact the tests are: lack of condom use, multiple sexual partners, and illicit drug use. While all of the behaviors are considered at risk behaviors of contracting HIV/AIDS, illicit drug use is especially dangerous because needle sharing (another method of how HIV could be contracted). Additionally, individuals on drugs are often willing to exhaust all possibilities, including sexual favors as a form of payment in order to receive his next high (CDC, 2018).

These attributing factors are countered with underlying associations. Race/ethnicity, education and health literacy, and socioeconomics all contribute towards the communication gap between MSM and medical providers. Race and ethnicity are a strong dividing force between African Americans and physicians specifically, because of the countless prior experiences of racial discrimination, medical provider neglect, and provider mistrust (Armstrong et al., 2013). Furthermore, low levels of health literacy within the MSM community is dividing factor because health literacy allows for a more in-depth dialogue between MSM and physicians, and even allows MSM to properly advocate for himself in respected settings (U.S. Department of Health and Human Services, N.D.). Lastly, socioeconomics is arguably the biggest force driving a wedge between MSM and medical providers. A strong communication cannot be developed if the individual cannot afford to pay for medical treatment and services. According to Gayles et al., (2016) low socioeconomic status has a direct impact on HIV status.

With all numerous attributing factors against MSM, it is imperative for physicians to go above and beyond to mend these bridges and bridge the communication gap by instilling a level of trust and protection that may not have been afflicted from that physician personally, but from poor physician/patient relations overall.

Chapter 3: Research Method

Introduction

In this study, I examined the prospective effects of medical professionals' communication with MSM and how it relates to the spread of HIV/AIDS. Thorough explanations of the dangers of HIV/AIDS to MSM must be strongly emphasized to stop the spread of HIV/AIDS in the MSM community. This may be done with positive forms of communication regarding awareness and prevention of HIV/AIDS, while simultaneously reinforcing the need to take better precautionary measures regarding sexual health.

In this dissertation a quantitative survey research was applied, using cross-sectional study design. The quantitative data were analyzed using bivariate and multivariable analyses. The population was adult males, aged 18 years and older, who engage in sexual intercourse (including oral intercourse) with other men in the New York City metropolitan area. The sampling method used will be mixture of convenience and snowball sampling (both are a form of non-probability sampling). Convenience sampling is a selection of people that are easily accessible, whereas snowball sampling relies on referrals of the study (Statpac, 2017). These forms of sampling were convenient to the research because the same demographic can refer a friend just like him to participate.

The snowball sampling method was also a form of recruitment for this study. Outside of the snowball sampling, flyers, posters, and social media outlets were to recruit subjects. Once potential participants were identified, they were asked to complete an informed consent process before completing a survey via SurveyMonkey.

The method of data collection is crucial to this study because it effects the validity and reliability of the data. Validity and reliability are the founding principles that prove whether your research is credible or not. Reliability is the extent to which a measurement instrument or procedure yields the same results on repeated trials (SOC.IASTATE, N.D.). Whereas validity is the extent to which an instrument measures what it is supposed to measure (SOC.IASTATE, N.D.). There are two forms of survey styles which include web-based questionnaire or surveys and face-to-face interview style surveys. This dissertation used a web-based survey.

Web-based surveys are extremely advantageous because they are economical. Because approximately 84% of the adult U.S. population uses the internet, it is a convenient tool (Pew Research Center, 2015). The surveys can be completed at the individual's leisure without any additional expenses on the ends of person answering the questions or distributing them. Another advantage is, web-based surveys eliminate the use of a person interviewing an individual that eliminates bias and judgment that can either be portrayed by the interviewer or perceived by the interviewee (Pew Research Center, 2015). However, there are limitations to the use of web-based surveys such as the lack of security with breaches being more popular than ever. Unfortunately, hackers are getting cleverer about how to obtain sensitive data. "The reason we see so much volume as well is because cybercriminals are trying to evade [detection]. They know about security vendors, they know about law enforcement, they're trying to constantly morph and shift their tactics," (CNBC, 2015). This type of scare can violate HIPAA laws and create serious breaches and potentially have people's personal and health records exposed.

The in-depth detail of how this dissertation will be conducted is imperative, because it needs to meet the guidelines and approval of the Institutional Review Board (IRB). Ethical committees and regulations help obtain the utmost respect for individuals participating in research studies. In this chapter, I will go into more in depth information regarding the research design of the study, the sampling, recruiting, and operationalization of the study. In addition, I will discuss the data analysis plan, the validity, and any threats to the validity of this study, and I will end the chapter with the breakdown of ethical procedures.

Research Design

The main objectives of this study include examining if the quantity and the quality of medical professionals' communication is associated with regular HIV screening and testing in MSM in New York City area, controlled for race/ethnicity, educational level, and income. And if medical professional communication have an influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors, controlled for race/ethnicity, educational level, and income, to limit the spread of the disease as much as possible.

The study can help to demonstrate the need to enhance the relationship between medical professionals and MSM and explain specific dangers which the population under are exposed in relation to HIV/AIDS. Cross-sectional studies observe the relationship of people exposed to the disease. Cross-sectional designs are often identified with survey research. Often times this method is effective when researchers are trying to establish a pattern between relationships and variables (Frankfort-Nachmias, 2008). The benefit to cross-sectional design is that researchers can use statistical analysis to approximate the operations that are built into the design (Frankfort & Nachmias, 2008). The advantage to a cross-sectional design is that it allows researchers to carry out the experiment in real time, which in turn increases external validity. In addition, there is no requirement of individual assignment.

The study variables have therefore been developed with the aim of establishing the nature and significance of the relationship between the quantity and the quality of medical professionals' communication with MSM and exposure to HIV/AIDS. According to McBurney and White (2013), survey analysis is effective and a cross-sectional research design whose aim is to understand the differences in variable scores so as suggestive evidence can be drawn for or against the study thesis. In the current study, the dependent variable identified in RQ1 are regular HIV screening and testing, and the dependent variable in RQ2 are modifying high-risk behaviors attributing to HIV/AID in MSM (i.e. lack of condom use, multiple sexual partners, drug use). As an exploratory descriptive design, the study explores how lack of medical professional advice could impact these dependent variables. Exploratory research focuses on areas of knowledge which have not been sufficiently studied and establish new meanings towards the realization of a specific study objective (McBurney & White, 2013).

Results or relationships from exploratory studies are not necessarily generalizable to a larger population but instead provide a better understanding of the sample under investigation (Smith, 2015). For instance, the findings in this study may not lead to conclusions regarding gay men exposure to HIV/AIDS but provide a study framework that can be successfully be replicated in future studies. The researcher, therefore, deemed the exploratory, cross-sectional design was appropriate for this study as it enhances better understanding of the dangers of sexual activities of gay men and how frequent medical consultations can improve the sexual health of this population. Furthermore, the exploratory research examines into detail the reality of the existing situation and gives an accurate account of the characteristics of the population under study. In this case, the study design can help in the development of a new theory, identify problems of certain sexual activities and help in making evidence-based judgments (Corker & Begg, 2009).

This study was conducted for a period of six months. To fit all the study deliverables within this tight schedule, a clear and practical timescale must be developed to facilitate the organization and coordination of each stage of the research process and successful integration of various study stages. The six-month period was broken down into specific tasks such as sampling, data collection, and analysis of data, report writing and presentation of the final draft.

Methodology

Population

This dissertation evaluated adult MSM (18 years and above), willing to consent to participating in the study. The men must have had sexual intercourse (anal or oral) with another man, within the last 12 months. The men may or may not be HIV positive, have had communication with a healthcare or medical professional regarding sexual health, HIV, or AIDS within the last five years, and have English reading ability.

Sampling and Sampling Procedures

The sampling technique is normally chosen depending on the characteristics of the population and the objective of the study (McBurney & White, 2013). Given that this is a quantitative study, a larger sample will be needed to enhance validity and reliability of the study data and results. However, this study targets a relatively sensitive and difficult to identify population making random sampling techniques relatively impossible to be used. In this regard, the researcher adopted a convenience, snowball sampling technique.

Snowball sampling. Snowball sampling is a type of non-probability sampling technique used in this study as it is difficult to find a population of gay men that is randomly distributed. Non-probability sampling implies that not every member of the population has an equal chance of being included in the sample as there is no census or complete list of all men sleeping with other men or gays living within a particular area (Creswell, 2013). Consequently, there is no sampling frame from which the sample could be drawn randomly to ensure all MSM or gay men have an equal chance of being included in the sample. According to past studies, non-probability sampling is a rational choice in cases where it is impossible to identify all the members of the population. Some of the most common features of non-probability sampling include (1) every person who meets the criteria is asked to participate, i.e., gay men or men sleeping with other men, (2) it is less complicated and cheaper than random sampling and lastly (3) researcher's judgment is used to select individual subjects who meet the eligibility criteria (Walters & Freeman, 2010).

In most of the social sciences, snowball sampling technique is used where the existing study subjects, i.e., friends or workmates of the researcher are used to recruit future subjects among their acquaintances. As the sample builds up, sufficient data will be gathered that is particularly useful for the research (Hassan, 2006). This sampling technique is the most effective when investigating hidden populations such as drug users, sex workers, and homosexuals, which are in most cases difficult for the researchers to access. Due to the challenges of access, snowball sampling is usually subject to numerous biases as a person is more likely recruit friends or members of his/her virtual network. Despite the sampling biases associated with this sampling technique, studies have shown that variation of snowball sampling called respondent-driven sampling allow the researcher to make asymptotically unbiased estimates from snowball samples under certain conditions (Creswell, 2013). Furthermore, the technique allows researchers to make estimates about social networks connecting hidden population.

In this type of research, there are several advantages associated with using snowball sampling technique as opposed to other approaches. First, snowball sampling helps the researcher to locate hidden populations in a much more effective way than other types of sampling. For instance, it enhances the possibility of including people in the survey that they would not have known about through the use of social networks (Hassan, 2006). Second, it helps to locate people from the specific population. Since there is no lists or obvious sources of locating members of a particular population, this technique enables the researcher to use previous contacts to gain access or cooperation from the new subjects. Finally, the technique is cheaper and takes less time as the subjects are used to locate hidden populations (Creswell, 2013). Furthermore, snowball sampling does not require complex planning and staffing compared to other sampling methods.

Snowball sampling uses both alternative and complementary research methodologies. As an alternative methodology, the snowball is used in this study as other research methods cannot be employed due to challenging circumstances that make random sampling possible. Though it is the only feasible approach that can be used for this type of study, it also has several weaknesses. For example, community bias is prevalent with this technique as first participants have a strong impact on the sample. In this case, this type of sampling can produce inexact and inaccurate results (Walters & Freeman, 2010). Besides, the method is heavily reliant on the skills of the individual conducting the actual sampling and the ability of the individual to network and find an appropriate sample vertically. Snowball sampling can also be affected by the unknown sample or population size from the beginning. Due to this, there is a high risk that the researcher may not attain the projected sample size thus impacting on the validity and accuracy of the findings (Hassan, 2006). Lastly, the researcher lacks control of the sampling method as the subjects under study belong to the hidden population.

Sample size analysis. Statistical power analysis assists in the estimation of sample size and confidence interval. The main goal of power analysis is to determine how large a sample ought to be and allow for statistical judgments which are accurate and reliable. Performing power analysis is necessary to ensure that the sample size is not too high or low. If the sample size is too low, the investigation will not be precise in providing reliable answers to the questions being investigated and when the sample size is too large, time and resources will be wasted for a minimal gain. Power analysis helps in determining a sample size that can decrease both type I and II errors (Frankfort-Nachimias & Nachimias, 2008). G*power 3.1 calculator (Faul, Erdfelder, Buchner, & Lang, 2009) was used to estimate the appropriate sample size for the study and to achieve a satisfactory statistical power of .80. This sample size was calculated based on the research question that has the highest number of independent variables. Since there are no previous studies investigating similar RQs, I used medium effect size to estimate the needed sample size. The effect size in a logistic regression study is the odds ratio *(OR*) and an *OR* of 2.0 is considered as a medium effect size (Rosenthal, 1996)). This measure of effect size was used to determine the effect size for the present study. Based on the research questions posed for the study, a regression analysis with a medium effect size of 2.0, an alpha level of .05, and a power of .80 would require a sample size of 113 participants.

Procedures for Recruitment, Data Collection, and Participation

Recruitment. The recruitment process for this study included invitations in my social media and possibly flyers in public places in which included information on the study, the inclusion criteria, and a link to the online consent form and the survey, as well as my email for further information if asked by the participant. This process is largely confidential and ensures that there are no privacy breaches. Alternatively, a potential participant can ask his sex partner or friends if they are interested in the study before connecting them with the researcher. These confidential steps must be taken to avoid risks of violating individual's privacy as contained in the informed consent forms. In this technique, the first part of the online survey included the informed consent form and contact details, and if the potential participants agree, they can have access to the survey. Also, if the participant was interested in the study participation, then he was free to contact the researcher for any potential question regarding the study

Data collection. Data used in this study were collected using an online questionnaire. This type of survey is selected for this study as it is convenient and relatively cheap to administer. Generally, a questionnaire is referred to as a set of systematically structured questions developed by the researcher to get the required information from the respondents (Frankfort-Nachimias & Nachimias, 2008). As an important research instrument and a tool for data collection, questionnaires are mainly used as they allow for measurements while open-ended questions in this questionnaire will allow for the generation of qualitative and exploratory data. Measurement specifications used in this study depends on several factors such as the nature of the population being surveyed, the type of survey and the level of accuracy needed for the numerical results to be interpreted. Some of the features of questionnaires for this type of study include participant enters his responses on the questionnaire, saving the researcher's time, compared to the time required to conduct personal interviews, it is cheaper than the interview method, the respondents feel that they remain anonymous while data is being collected on wide range of topics within a limited period.

Questionnaire format are normally standard for all subjects and independent of the researcher’s opinions or moods.

Participants’ exit strategy. As highlighted earlier in the proposal, participants in this study had a right to cancel their participation in the study. According to Durso and Meyer (2013), on the participation of vulnerable populations in research activities, more people tend to withdraw from these studies compared to other general studies. The quality and duration of the researcher-participant relationship depend on factors, such as successful rapport and trust building. Without trust, the researcher should provide an opportunity for the participant to negotiate for an exit strategy or closure. Given what is at stake regarding the study, it is imperative for the researcher and participants to enter a voluntary dialogue of closure which will be obtained via signing the informed consent. Otherwise, participants may choose to end their relationships as they may perceive their participation to be more like an object or enterprise in the study.

Instrumentation, Operationalization and Data Analysis Plan

In this quantitative research, the researcher aimed to determine the relationship between the independent variables (quantity and quality of medical professional’s communication) and the dependent variables (regular HIV screening and testing, as well as modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors), controlled for race/ethnicity, educational level, and income, in MSM in New York City area, to limit the spread of the disease as much as possible.

In this study an original survey questionnaire was used, addressing basic demographic questions, and then proceeding into the RQ1 and RQ2 questions(Appendix

A). The demographic questions covered age, location, ethnicity, education, and income. Both RQ1 and RQ2 questions asked the participant if they seek medical professional screening/testing for HIV/AIDS, as well as various questions to assess the quality and quantity of communication and interaction between himself and the physician. For example, one of the RQ1 quality questions assesses the comfort level of sexual health questions with primary care physicians. Another example is one of the RQ2 questions addressing quantity, by asking “Does the number of appointments with your PCP or medical health clinic provider, play a role in changing/modifying any sexual behaviors?”.

In this case, the validity of the instrument can help in determining the magnitude and direction of the effect of the independent variables on the dependent variables. The validity of the research instrument refers to its ability to measure what it is supposed to be measuring. More specifically, internal validity refers to the extent to which factors that influence MSM/gays exposure to HIV/AIDS are a true reflection of the reality rather than the effect of other extraneous factors which necessarily does not relate to medical professional’s communication. This type of validity was confirmed by pilot testing the survey in 5-10 MSM who have similar characteristics with the study sample. After receiving their feedback on the survey, I revised the questions accordingly.

Finally, the reliability of the study is the degree of consistency or accuracy with which the instrument measures the attribute it is designed to measure. For the study and findings to be reliable, it implies that the same results would be obtained even if the study is replicated by other researchers using a similar method (Neuman & Neuman, 2006). To determine the reliability and internal consistency of the survey used, the I conducted a Cronbach’s alpha analysis

As can be seen in Appendix A, all the variables/items of the survey are categorical. The analysis of the data will be consisted of three phases. First, descriptive statistics for all the independent, dependent and control variables were performed, using frequencies (%) and mode as measure of tendency. Second, bivariate analysis between each predictor variable (independent and control) and the outcome variable was conducted, applying Pearson’s chi-square. Finally, in order to have as valid results as possible, binary logistic regression was performed between all the predictors and the outcome variables per RQ.

Threats to Validity

Internal validity refers to, how well the study was run (research design, operational definitions used, how variables were measured, what was/wasn't measured, etc.), and how confidently one can conclude that the change in the dependent variable was produced solely by the independent variable and not extraneous ones (Huitt, & Kaeck, 1999). External validity is the extent to which a study's can be applied to other populations (Huitt, & Kaeck, 1999).

Part of the data on this study deals with behavioral data questioning the behaviors of MSM in regards to sexual intercourse and evaluating what can be done better. The challenge with behavioral models and questionnaires is that they require honesty and validity from the patients. Validity it is the foundation of truth. It is a measurement of the degree of success or failure of a project (Crosby, DiClemente, & Salazar, 2013). Internal validity is important to a study because it highlights the capability of making accurate conclusions, whereas external validity expresses the capacity in which the generalizations of a study are held (Crosby, DiClemente, & Salazar, 2013). With that being said, it may be hard for an MSM to provide truthful information about a topic as personal as sexual history and activity. To address this limitation as much as possible, the survey was designed to respect participants' opinions and beliefs, without attempting to criticize their choices.

Other threats to validity include missing data and bias. Missing data affect the validity of the data analysis because it has the potential to create unnecessary biases. One way to suggest minimizing missing data is to encourage participants to respond to all the questions, in order to have meaningful results that can help improve the quality and quantity of medical professionals' communication. Also, having less questions that require recall information will help limit recall bias.

Regarding external validity, a generalization of the study results usually depends on the degree to which the sample is a representation of the entire population (Sarantakos, 2013). In the current study, low external validity will imply that the results only apply to the gay men under investigation but not the general population of gay men. In this study, external validity has been compromised by using a non-probability sample of MSM. In this case, there is no guarantee that gays who are under investigation have similar knowledge, attitude, and beliefs regarding medical professional's communication compared to those who did not participate in the study. Since this sample was not drawn randomly, the members of the target population did not have an equal chance of participating in the study. However, I addressed this limitation by applying the appropriate statistical analysis (multivariable) to be able to increase the external validity of the study as much as possible.

Ethical Procedures

Every research study contains risks and benefits to its study; it is what encompasses the study and provides diversity amongst its counter studies. Ethical committees and regulations help obtain the utmost respect for individuals participating in research studies. An ethical concern that surrounds partisanship of community partners when conducting a research study could be represented by specific population in the community. This population needs to be protected and that is usually ensured through ethical committees such as institutional review boards and documented regulations such as informed consent forms. Both ensure the safety and protection in individuals participating in a research study.

According to Walden's IRB guidelines, informed consent forms were implemented for serving its three main purposes, ensuring: respect, which includes respect for human life and all humane participants; beneficence, includes providing minimal risks to the best of the study facilities capability to patients; and justice which refers to patients justly being provided detailed, complete and accurate information regarding the study.

Researchers continue to face ethical dilemmas while conducting studies where people are involved as subjects of investigation. The researchers have a moral and ethical duty to exercise care that the rights of individuals and institutions are sufficiently safeguarded (Neuman & Neuman, 2006). First, the researcher sought permission from relevant authorities to conduct the study, the Walden IRB in this case (approval # is 02-05-19-0299116). The researcher then sought permission from the people for them to answer questionnaires. Second, the researcher also adhered to all principles of research ethics such as beneficence, respect for human dignity and voluntary participation with informed consent. The principle of beneficence encompasses freedom from harm and exploitation.

In this study, the participants did not experience physical harm as they were only required to complete online and anonymous questionnaires. On the other hand, the principle of respect for human dignity includes the right to self-determination and full disclosure that must be honored. In this case, the participants' rights to self-determination must be honored as they can decide independently without any form of coercion. Lastly, each participant voluntarily signed a consent form.

Summary

The focus of this dissertation was to help demonstrate a need for an enhanced relationship between medical professionals and MSM. This dissertation evaluated MSM in the New York City metropolitan area by using snowball sampling. After recruitment, participants signed an informed consent that provided detailed information regarding the study, how the study was conducted, and any safety, ethics, or confidentiality concerns.

In the next chapter data analysis will be provided and discussed. This will include any information pertaining to the time frame of collection, discrepancies in the data, and representation of the sample size of the data. Additionally, the results of the data will be presented. This will include information pertaining to the characteristics of the sample as well as statistical bivariate and multivariable analysis.

Chapter 4: Results

Introduction

The purpose in this study was to investigate whether medical professional communication is associated with regular HIV screening and testing in MSM, and whether medical professional communication has an influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors to limit the spread of the disease as much as possible. The results of this dissertation can be used to help demonstrate a need for a better relationship between medical professionals and MSM. Explaining the importance of communicating information regarding risks, awareness, and prevention of HIV/AIDS to MSM in order to stop the spread of the disease in this population is imperative and provided MSM with positive reinforcement to take better precautionary measures regarding their health and quality of life. Edelman et al. (2014) stated that improving provider understanding of homosexual complexities was necessary in order to transcend barriers of trust among MSM and providers.

Data Collection

This dissertation evaluated MSM from aged 18 years and older, willing to consent to participating in the study. The men must have had sexual intercourse (anal or oral) with another man within the last 12 months. The men may or may not be HIV positive, have had communication with a health care or medical professional regarding sexual health, HIV, or AIDS within the last 5 years, and have English reading ability.

Using convenience snowball sampling, the recruitment process for this study included invitations to participate in an anonymous online survey via SurveyMonkey. These invitations included direct invitations in social media, as well as posted flyers in public places that included information on the study, the inclusion criteria, and a link to the online consent form and the survey, as well as my email for further information if asked by the participant. This process was largely confidential and ensured that there are no privacy breaches. Alternatively, a potential participant could ask his sex partner or friends if he were interested in the study before connecting them with the researcher or link to the survey.

There were 126 participants recruited for the project which exceeds the minimum sample size of 113 that was calculated in a priori power analysis. The data were collected between Saturday, March 30, 2019 to Saturday, April 27, 2019. The participants reported being mostly baby boomer and silent generation, White or Caucasian, having an income level of less than $65,000 a year, and were evenly divided across education levels (Table 1).

Table 1

MSM participants' demographics (n=126).

Characteristic		*n*	%
Age cohort			
	Millennial	17	13.5
	Generation X	17	13.5
	Baby boomer and silent generation	54	42.9
	Total	88	69.8
	Missing in system	38	30.2
	Total	126	100.0
Race			
	White/Caucasian	80	63.5
	Black/African American	17	13.5
	Other	29	23.0
	Total	126	100.0
Income			
	≤$65,000	73	57.9
	>$65,000	53	42.1
	Total	126	100.0
Education			
	≤High school/GED	41	32.5
	Associates/bachelor degree	44	34.9
	Postgraduate degree	41	32.5
Total		126	100.0

Results

Reliability of the Survey

The reliability of the study is the degree of consistency or accuracy with which the instrument measures the attribute it is designed to measure. For the study and findings to be reliable, it implies that the same results would be obtained even if the study is replicated by other researchers using a similar method (Neuman & Neuman, 2006). To determine the reliability and internal consistency of the survey used, the researcher will conduct a Cronbach's alpha analysis.

The following five questions were used to conduct the Cronbach's alpha analysis:

- Does your PCP or medical health clinic provider make you feel comfortable discussing your sexual health comments, questions, or concerns?
- Do you feel as though your PCP or medical health clinic provider respects you?
- Do you feel as though your PCP or medical health clinic provider has you best interest regarding your sexual health?
- Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity?
- Does the number of appointments with your PCP or medical health clinic provider, play a role in changing/modifying any sexual behaviors?

The results were adequate reliability of 0.730 as seen in Table 2.

Table 2

Cronbach's Alpha Analysis

Cronbach' alpha	N of items
0.730	5

Descriptive Statistics

As can be seen in Appendix A, all the variables/items of the survey are categorical. The analysis of the data consisted of three phases. First, descriptive statistics for all the independent, dependent and control variables were performed, using frequencies (%). Second, bivariate analysis between each predictor variable (independent and control) and the outcome variable was conducted, applying Pearson's chi-square. Finally, to have as valid results as possible, binary logistic regression was performed between all of the predictors and the outcome variables per RQ.

Descriptive Statistics of Survey Questions

The survey questions asked were very carefully curtailed to understand MSM's interactions with his physician. However, some of these questions had a response that requires deeper evaluation as to why MSM are not seeking medical attention or engagement. The first descriptive question asks, "Have you ever visited a primary care physician or medical health provider about HIV/AIDS?" and over 70 percent of the population stated no. This response is not only concerning, but creates a pool of participants unable to address the quality of his health care visits pertaining to

HIV/AIDS, if he does not see a physician or medical professional regarding HIV/AIDS. Because participants are not seeing a medical professional about sexual health, over 60 percent of the participants surveyed were unable to address questions pertaining to his physician asking about his sexual behaviors, or his comfort levels discussing sexual health and/or sexual behaviors with his physician. What can be appreciated with the data, is, of the 42 percent of individuals that did see a medical professional, 34 percent feel as though his PCP or medical provider respects him.

Table 3

Descriptive Statistics of Survey Questions

Question	n	%
Have you ever visited a primary care physician (PCP) or medical health clinic provider about HIV/AIDS?		
Yes	33	26.2
No	93	73.8
Total	126	100.0
How often do you visit a PCP of medical health clinic about HIV/AIDS?		
At least once per year	19	15.1
At least once in the last 5 years	16	12.7
Total	35	27.8
Missing	91	72.2
Total	126	100.0
During your visit did the PCP or medical health clinic provider ask about your sexual behaviors (condom use, abstinence, etc.), regular HIV screening and testing? (IV-Quantity of communication)		
Often to Every Time	26	20.6
Sometimes/Rarely/Never	19	15.1
Total	45	35.7
Missing	81	64.3
Total	126	100.0
Does your PCP or medical health clinic provider make you feel comfortable discussing your sexual health comments,		

questions, or concerns?

Yes	36	28.6
No	12	9.5
Total	48	38.1
Missing	78	61.9
Total	126	100.0

Do you feel as though your PCP or medical health clinic provider respects you?

Yes	44	34.9
No	10	7.9
Total	54	42.9
Missing	72	57.1
Total	126	100.0

Do you feel as though your PCP or medical health clinic provider has you best interest regarding your sexual health?

Yes	42	33.3
No	9	7.1
Total	51	40.5
Missing	75	59.5
Total	126	100.0

How often do you get tested or screened for HIV/AIDS?

Once in life to Never	56	44.4
At least 1-2 times per year	34	27.0
When I think I have something	35	27.8
Total	125	99.2
Missing	1	.8
Total	126	100.0

Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity?

Yes	19	15.1
No	32	25.4
Total	51	40.5
Missing	75	59.5
Total	126	100.0

Does the number of appointments with your PCP or medical health clinic provider, play a role in changing/modifying any sexual behaviors?

Yes	14	11.1
No	39	31.0
Total	53	42.1
Missing	73	57.9
Total	126	100.0

During the last 5 years, did you change/modify any of your sexual behaviors?		
Yes	27	21.4
No	49	38.9
Total	76	60.3
Missing	50	39.7
Total	126	100.0

RQ1 Results

Research Question: is medical professional communication (assessed via survey by examining quality versus quantity of this communication) associated with regular HIV screening and testing (assessed by survey) in MSM, controlled for race/ethnicity, educational level, and income?

According to x^2 analysis, the only significant result for this RQ is the following (Table 4); the participants who have ever visited a medical professional about HIV/AIDS were tested in significantly higher frequency compared to those that did not visit medical professional for this reason (51.5% vs. 18.5%, respectively, $p<0.001$). This association has a medium effect size (Cramer's V=0.341, $p<0.001$). Therefore, the null hypothesis for this RQ is rejected. However, after running binomial regression analysis having as predictors "have ever visited medical professional about HIV/AIDS", race/ethnicity, educational level, and income, and as outcome variable regular test/screening for HIV (two levels: at least once in the last 5 years vs. at least once per year), none of the predictors was found to have a significant effect on the dependent variable.

Table 4.

Have you ever visited a primary care physician (PCP) or medical health clinic provider about HIV/AIDS? vs How often do you get tested or screened for HIV/AIDS? Crosstabulation

		How often do you get tested or screened for HIV/AIDS?			
		Once in life to Never	At least 1-2 times per year	When I think I have something	Total
Have you ever visited a primary care physician (PCP) or medical health clinic provider about HIV/AIDS?	Yes	12 (36.4%)	17(51.5%)	4 (12.1%)	33 (100%)
	No	44 (47.8%)	17 (18.5%)	31 (33.7%)	92(100%)
Total (N)		56	34	35	125

x^2= 14.496, p<0.001, Cramer's V=0.341, p<0.001

RQ2

Research question: Does medical professional communication (assessed via survey by examining quality versus quantity of this communication) have an influence on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors (i.e. lack of condom use, multiple sexual partners, drug use)?

According to x^2 analysis, the approach of a PCP or medical health clinic provider regarding sexual health/behaviors had a significant impact on changing/modifying sexual actions/behaviors/activity of the participants (Table 5). More specifically, significantly more participants changed their sexual behavior during the last five years and also considered that the approach of the medical professional contributed in this change, compared to those who changed their sexual behavior but did not consider this approach helpful (73.7% vs. 26.7%, $p<0.001$). This association has a medium effect size (Cramer's V=0.461, $p<0.001$). The most common modifications in sexual behavior are presented in

Table 6. Therefore, the null hypothesis for this RQ is rejected. However, after running binomial regression analysis having as predictors “Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity”, race/ethnicity, educational level, and income, and as outcome variable change of sexual behavior during the last five years, none of the predictors was found to have a significant impact on the dependent variable.

Table 5

Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity? vs. During the last 5 years, did you change/modify any of your sexual behaviors? Crosstabulation

		During the last 5 years, did you change/modify any of your sexual behaviors?		
		Yes	No	Total
Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity?	Yes	14 (73.7%)	5 (26.3%)	19 (100%)
	No	8(26.7%)	22 (73.3%)	30 (100%)
Total (N)		22	27	49

x^2= 10.395, p<0.001, Cramer’s V=0.461, p<0.001

Table 6.

Most Common Modified Sexual Behaviors by the Participants During the Last 5 years (n=27)

	N	%
Abstinence	14	51.85
Condom usage	13	48.15
Limitation of multiple sexual partners	10	37
Additional test screening	9	33.3

Over the course of roughly four weeks, snowball sampling was used to evaluate the communication of MSM and medical professionals in regards to HIV/AIDS. Over the four-week period, 126 men answered the online survey questions pertaining to his visits, the frequency of his visits, the comfort level of engagement during the visits, and any modifying behaviors due to his visits. The findings indicated that the only significant result for RQ1 is the participants who have ever visited a medical professional about HIV/AIDS were tested in significantly higher frequency compared to those that did not visit medical professional regarding HIV/AIDS. Additionally, the approach of a PCP or medical health clinic provider regarding sexual health/behaviors had a significant impact on changing/modifying sexual actions/behaviors/activity of the participants. Both findings are important to bridging the gap between both groups.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

I conducted this study to evaluate the effect of medical professionals' communication on modifying high-risk behaviors attributing to HIV/AIDS MSM behaviors. Understanding the quality and quantity of the communication was important to determining where the potential gap of communication lied. Although the quantity of visits is imperative due to being able to reiterate the importance health literacy with HIV/AIDS, quality is of equal importance. However, on a provider level, quality is difficult to measure for two reasons. First, physician peers cannot measure quality against his/her peers due to bias. Second, the quality of the physicians may not be measured by a patient due to MSM not feeling empowered enough to express his concerns. Unfortunately, the latter is a more frequent issue that should come as no surprise because it is not a foreign concept that providers are not often trained on cultural competence regarding the LGBTQ community, which fosters poor quality visits, bad experiences, and expectations of discrimination (Sabin, Riskind, & Nosek, 2015). In this study, I provided supporting evidence that quality communication is a catalyst for lifestyle changes and modifying poor sexual health behaviors.

To address the impact of medical professional's communication with MSM, a survey research study was conducted. In this study, 126 MSM were evaluated via survey research and asked numerous demographic questions, as well as questions pertaining to the quality and quantity of their visits with physicians or medical professionals, pertaining to HIV/AIDS.

The data were collected in the course of approximately 4 weeks, via an online survey engine, SurveyMonkey. This online survey engine allowed participants to access the survey anonymously. The participants had to meet a specific inclusion criterion, which included being older than 18 years, being a consenting male, English reading ability, and having had sexual intercourse (anal or oral) with another man in the past 5 years. After reading the informed consent, and providing consent, the participant filled out all 19 questions based on quality and quantity of medical communication.

Interpretation of the Findings

The questions consisted of demographic questions, questions related to the quality of his visits, and questions related to the quantity of his visits. The outcome of RQ1 was that the participants who have ever visited a medical professional about HIV/AIDS were tested in significantly higher frequency compared to those that did not visit medical professional for this reason (51.5% vs. 18.5%, respectively, $p < .001$). Specifically, MSM who have visited a medical provider for HIV/AIDS were attributed with regular visits with his physician, either annually, or biannually. This group of individuals that feel the need to regularly see his physician, exhibit what was likely a positive influence regarding patient-provider interaction, of feeling respected, treated with dignity, and conversed with in plain language (Flickinger, Saha, Moore, & Beach, 2013).

According to the HBM, patient-provider interaction is influenced by MSM disclosing his health to providers in a way that can help capture the actual behavior that is better in estimating the scope of HIV risk (Calabrese et al., 2014). When MSM patients disclose their sexual orientation, trained health care professionals can help them with medical personnel to take care of their physical health.

An example of this is a study conducted by Oetzel et al. (2015), which also demonstrated the importance of providers’ input in regards to patients and the HBM. In this study, 344 patients in the southwestern portion of the United States living with HIV demonstrated the importance of patient-provider interaction. In this survey study, the participants were questioned about their interactions with their physicians, and overall service (Oetzel et al., 2015). Oetzel et al.’s overall finding was that good patient-provider interaction was not only positive reinforcement, but helped patients adhere to taking medication in a timely manner, supporting the claim that good quality provider-patient interaction is crucial the longevity of the patient’s health.

The outcome of RQ2 was that significantly more participants changed their sexual behavior during the last 5 years, and also considered that the approach of the medical professional contributed in this change, compared with those who changed their sexual behavior but did not consider this approach helpful (73.7% vs. 26.7%, $p < .001$). This is important because this question demonstrates how good quality interaction between the patient and the provider can cause a beneficial change.

A critical journal review of the HBM by Wirtz et al. (2014) found that more than 10 years of perceived susceptibility contributed actively to preventive health behaviors. Perceived barriers were considered to be the most powerful dimension of HBM among all the studies included. According to Wirtz’s study, there is a stronger relationship that exists between a perceived threat and any involvement to challenge the safety and practices of patients. It further implies that patients who do not recognize the nature of risks and the potential susceptibility are not likely to be involved in challenging circumstances of their safety practices (Wirtz et al., 2014).

After evaluating both questions, there were two questions that had extremely alarming findings. One finding being that more than 70% of the sample did not visit a medical provider for HIV/AIDS, although this is a high-risk population group. This is alarming because as previously mentioned, mitigating factors such as race, socioeconomic status, and education may play a role in that. According to Arnold, Rebchook, and Kegeles, (2014) racism and homophobia are related to HIV-related stigma; rather than facing this sort of alienation or rejection, MSM find other alternatives such as avoidance. The other disturbing finding was 56% of the MSM only tested once or even never for HIV, and 35% only when they think that they have something, which both percentages are very high for this high-risk population group. This is alarming because HIV/AIDS does not always come with immediate symptoms, often, the disease can lie dormant in the body for years before experiencing any symptom(s) (Paddock, 2018). Therefore waiting until one “has something” is a serious health hazard not only to himself, but to the community.

This study was also able to highlight that 21 percent of the participants stated that they changed or modified their sexual behaviors within the last five years. There were several types of changes the participants stated they changed, including but not limited to, condom usage, multiple sexual partners, abstinence, additional testing/screening, or other methods. From these results, it can be attested that MSM have continued to have unprotected sex and this remains a threat among some MSM who are HIV positive, in particular, the ones with non-suppressed viral load. Therefore, with the above changes, it can be easier to understand the patterns of risk behaviors that exist amongst MSM who are HIV positive, before they are diagnosed and after (Khosropour et al., 2016). It is also a crucial way of assessing the potential risk of how HIV is spread in the society. In this study, there are multiple points are discussed that run parallel to the HIV care continuum, implying that there could be substantial changes occurring in different sexual risk connections and behaviors (Epstein et al., 2014). In other words, the changes could attribute to low-level risk behaviors among those receiving care. There for open dialogue between the provider and patient is necessary; and this study attributes to the need of medical professional's having a positive influence on MSM and his sexual health, when there is quality driven interaction.

Limitations of the Study

In this study, a cross sectional designed study was used, which easily allows for a sample (in this study, *n*=126) to represent the population being studied, while providing meaningful data (Setia, 2016). Using a cross-sectional design can be advantageous because it can provide information about the prevalence of outcomes or exposures, is fairly quick to conduct, and relatively inexpensive (Setia, 2016).

However, the use of cross-sectional designs also come with limitations. One limitation is that it's hard to derive casual relationships from these type of studies (Setia, 2016). Another limitation of this study was bias. The bias in this study may have created a window to interpret some of the associations and direction of associations from this survey (Setia, 2016). For example, recall bias may have occurred, and the participant may not remember the last time he went to see a medical provider regarding HIV/AIDS, so his answers may reflect skewed in these data, if he indicated he saw a physician in the last five years, however it was actually seven years, than he may be out of window and it could affect the results.

Another limitation of this study was the lack of control over the cross-sectional design on how to counter information that may have been provided. This study was an online survey that was distributed, therefore, information beyond the authors control could have occurred. For example, this study had a specific inclusion/exclusion criterion, but because this survey was distributed with the intent of protecting the participant's anonymity, some of the questions may have been answer untruthfully. There is no way to track if the participant was actually over the age of 18 because no one was there to check identification. Additionally, patients could have replied his answers based on what he assumed the author wanted.

The last limitation was the inadequate regression model, and its lack of significance in this study, pertaining to the results. After running a binomial regression analysis having as predictors "have ever visited medical professional about HIV/AIDS", race/ethnicity, educational level, and income, and as outcome variable regular test/screening for HIV (two levels: at least once in the last 5 years vs. at least once per year), none of the predictors was found to have a significant effect on the dependent variable. One suggestion on how to try to eliminate this limitation would be to increase the sample size and the statistical power. The power for regression analysis is the prospect of a substantial finding when in the population there is a significant relationship (Newsom, 2019).

Recommendations

This study was a simplified version of all that it can be. For future recommendations, there are two possible suggestions that could be made, the first being, to engage further in the research questions about why the participants are not going to see medical providers about the disease. With over 70 percent of the participants stating that they never visited a medical provider regarding HIV/AIDS, it is alarming, and there needs to be more information as to why there is a disconnect. In most cases, known HIV infection is associated with a lack of doctor visits. Bonney and Del Rio (2008) states that in the USA, not everyone has access to healthcare, or chooses to use his healthcare for HIV consultations. It is suggested that clinical settings become more feasible for MSM, so that he can effectively be assisted. Access is not the sole reason for lack of care, sometimes MSM do not to visit medical professionals more frequently because primary healthcare providers fail to provide HIV testing counseling (Fisher et al., 2018). Thus, with the increased rates of HIV prevalence and multiple risk behaviors, a different integration of HIV behavioral interventions needs to be conducted with routine counseling and testing to meet the challenges that MSM currently face.

Another suggestion for future research is to engage the medical providers. The prospective researcher should use this study and its results as a preface to show that there is a disconnect between physicians and MSM when it comes to discussing HIV/AIDS, so much so, that 70 percent of the population refuses to do so. The first part of engaging with the medical providers should be to ask if he/she was aware of this gap. The next part should be to ask if he/she would provide suggestions on how to communicate with this population, and the last part would be to do a follow up study, six months to a year later regarding any changes, post implementation. The follow up study should search for changes related to things that are done regarding demographic and behavioral characteristics to alter the association between HIV status and ethnicity/race. Therefore, the level of specific explanations is likely sufficient to explain any observed change disparities. Also, it is essential to create more interventions that are not only diverse within the ethnic groups but can acknowledge and embrace the diversity of lifestyles, social, and sexual identities among MSM.

Implications

This study has the potential to provide positive change on several levels. Individually, this study may be able to allow someone to see that by visiting a physician regarding HIV/AIDS, he may be able to improve his health in ways that he may not have been previously exposed to in the past. This study showed that it is statistically significant, in modifying the behavioral changes needed to prevent HIV/AIDS by seeking the expertise of a medical professional. On a family level, this can help many families start the conversation about sexual health, sexually transmitted diseases, and specifically HIV/AIDS. If more families were open to sexual health conversations, the health literacy of diseases such as this could improve, and the fear and/or hesitation of seeing a medically trained professional about sex or sexually transmitted diseases, wouldn’t be as frightening. As for society, this is extremely important to society because knowing that small changes such as seeing a medical professional, can change behavioral norms for the better, regarding HIV/AIDS is important.

Public health leaders and policy makers are the last demographic impacted by this study. Public health leaders need to generate and apply effective educational programs to increase the percentage of HIV screening. This study provides evidence that there is a gap in MSM patients and provider testing and screening. Effective educational programs with significant resources are possible suggestions on how to impact this community through input from the community, providers, researchers, and members who strive to combat the strikingly known disparities. In the 21st century, this still continues to be a struggle with policy makers on how to adopt public policies and programs as well as implementing adequate resources (Georgetown University, N.D.).

Another option is providing structural prevention approaches and culturally-sensitive health care services that reduce discrimination and stigma of MSM and those infected with HIV (Eldredge et al., 2016). The local community should develop intervention plans that bring attention and awareness to the forefront regarding the use of condoms, disease prevention from those who are positive, integrating medical and preventive care, as well as contextualizing the strategies that can address the issues that MSM face.

These options continue to circle back to the health belief model, which has three main components. The first component is believing that a HIV/AIDS can be avoided. The next is, having a positive expectation that by taking positive health actions, such as seeing a medical provider, seeking additional testing/screenings, using condoms, etc., will be effective at preventing HIV. And lastly, believing that he can successfully take these recommended health actions and enhance his life and lifestyle (University of Twente, 2017). By doing this, these small changes can have a major impact, and it can encourage more people to take ownership over his health.

Conclusions

This study was conducted with the intent to create a conversation around medical professionals and their communication with MSM, and how it affects behaviors pertaining to HIV/AIDS. Additionally, with this study it was revealed that a many MSM do not visit regularly a medical provider to discuss about HIV/AIDS, and also they were not regularly screened for this disease. . One cannot address conversations pertaining to medical providers without including the history of medical providers and poor race relations. With atrocities in the past including such as the Tuskegee Syphilis Study belong to medical providers not being open and honest with individuals of African descent, and using them as experiments (Armstrong et al, 2013), one can imagine why there is a disconnect in this community when it comes to speaking with medical providers about any subject.

Another factor that must be acknowledged between MSM and medical professionals' communication is socioeconomic status. Unfortunately, the United States does not provide universal healthcare, so a simple conversation regarding sexual health or addressing questions pertaining sexual health comes at an expense that most Americans don't have. Over 22 percent of the participants make less than $25,000 annually. People of lower income are often affected by health disparities (Jones, 2010). Therefore, in this case, it’s not that the individual does not want to seek treatment, it may just be that he cannot afford to do so.

The last factor that must be addressed in regards to the communication gap between MSM and medical professionals is education. In this study the highest education group was 26 percent of the participants having a high school diploma or GED, and six percent not even having a high school diploma or GED. With low levels of education, literacy can be assumed to be low, however, if regular literacy is low, it can be inferred that health literacy is even lower. Health literacy is needed because it is the ability to retain, understand, and process information pertaining to essential health needs and the services needed to make conscious health decisions (U.S. Department of Health and Human Services, N.D.). Without having this, it may be hard to want engage, let alone comprehend what a medical provider is trying to explain regarding HIV/AIDS prevention or awareness.

However, even with that information, there were still over 20 percent of participants that were able to demonstrate that the quality and quantity of visits can provide an impact on MSM in regards to his decisions pertaining to HIV/AIDS. In this study, it was determined that participants that did see a medical professional regarding HIV/AIDS actually received testing and screening for HIV/AIDS more frequently than his counterparts that did not seek the expertise of a trained medical professional. This study also indicated that MSM who sought after medical providers were likely to change risky sexual behaviors that could lead to HIV/AIDS. 21 percent of the participants stated that they changed or modified behaviors such as condom usage, abstinence, and limiting the number of sexual partners, after seeking speaking with a medical provider about HIV/AIDS.

These changes and modifications are important for not only the individual to be aware of, but also the medical provider. The medical providers should be made aware of his/her influence on changing behaviors that can decrease the prevalence of HIV/AIDS. This study should be used to foster a deeper conversation about medical provider's influence and how they can continue to be an important figure for decreasing the spread of a still lethal disease.

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Appendix: MSM Survey Questionnaire

Demographics:

Age

1. How old are you?	
2. Which demographic do you identify?	☐ Millennial ☐ Generation X ☐ Baby Boomer ☐ Silent Generation ☐ N/A

Location

1. How far away from New York City do you live?	☐ I live in New York City (NYC) ☐ 1-5 miles outside of NYC ☐ 5-10 miles outside of NYC ☐ 10-25 miles outside of NYC ☐ Over 25 miles outside of NYC

Ethnicity

1. What is your ethnicity?	Check All That Apply: ☐ White/Caucasian ☐ Black/African American ☐ Latino/Hispanic ☐ Asian ☐ Indian ☐ Island Pacific ☐ Native American ☐ Other

Education

1. What is your highest degree level?	☐ Not a high school graduate ☐ High School Diploma/ GED ☐ Associates Degree ☐ Bachelor’s Degree ☐ Master’s Degree ☐ Post-Graduate Degree ☐ Doctoral Degree

Income

1. What is your annual income level?	☐ Less than $25,000 ☐ $25,000-$40,000 ☐ $40,000- $65,000 ☐ $65,000- $100,000 ☐ $100,000 and above

<u>Research Question 1:</u>

1. Have you ever visited a primary care physician (PCP) or medical health clinic provider about HIV/AIDS? (Quantity of communication)	☐ Yes ☐ No
2. How often do you visit a PCP or medical health clinic about HIV/AIDS? (Quantity of communication)	☐ More than once per year. ☐ Once per year. ☐ Once or twice in the 5 last years. ☐ More than twice in the 5 last years. ☐ N/A because I did not answer yes to question #1.
3. During your visit, did the PCP or medical health clinic provider ask about your sexual behaviors (condom use, abstinence, etc.), regular HIV screening and testing? (Quantity of communication)	☐ Every time. ☐Often. ☐ Sometimes. ☐ Rarely/Never. ☐ N/A because I did not answer yes to question #1
4. Does your PCP or medical health clinic provider make you feel comfortable discussing your sexual health comments, questions, or concerns? (Quality of communication)	☐ Yes ☐ No ☐ N/A because I do not see a physician for HIV/AIDS assessment

5. Do you feel as though your PCP or medical health clinic provider respects you? (Quality of communication)	☐ Yes ☐ No ☐ N/A because I do not see a physician for HIV/AIDS assessment
6. Do you feel as though your PCP or medical health clinic provider has you best interest regarding your sexual health? (Quality of communication)	☐ Yes ☐ No ☐ N/A because I do not see a physician for HIV/AIDS assessment

7. How often do you get tested or screened for HIV/AIDS? (Dependent variable)	☐ Never ☐ Once in life ☐ 1-2 times per year ☐ More than twice a year ☐ When I think I have something

Research Question 2:

1. Does the approach of your PCP or medical health clinic provider regarding sexual health/behaviors help you change/modifying your sexual actions/behaviors/activity? (Quality of communication)	☐ Yes ☐ No ☐ N/A
2. Does the number of appointments with your PCP or medical health clinic provider, play a role in changing/modifying any sexual behaviors? (Quantity of communication)	☐ Yes ☐ No ☐ N/A

3. During the last 5 years, did you change/modify any of your sexual behaviors? (Dependent variable)	☐ Yes ☐ No ☐ N/A
4. If your answered yes to Question #3 above, what behaviors did you change/modify? (Dependent variable)	Check All That Apply: ☐ Condom usage ☐ Multiple sexual partners ☐ Abstinence ☐ Additional testing/screening ☐ Drug use ☐ Other, ____________________________