


# **HIV/AIDS beliefs among MSM in the Philippines.**

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## Abstract

This research study examines the beliefs related to HIV/AIDS risks and the perceived effectiveness of preventative measures among men who have sex with men (MSM) in the Philippines. Using a questionnaire developed using the Health Belief Model (HBM), this study endeavors to understand beliefs and thus improve counseling guidelines for MSM who continue to engage in risky sexual behaviors following VCT and a negative HIV test. The impact of HIV/AIDS on the Philippines is beginning to increase, affecting men and their partners. The rapid growth of HIV/AIDS among Filipino MSM indicates that more attention must be paid to the barriers and benefits of condom use within this high-risk population.

A background of the presence and prevalence of HIV/AIDS is presented. This study aims to answer the question of why MSM choose to have unprotected sex despite the risk of HIV/AIDS. Multiple barriers to condom use are identified, including the availability of condoms, partner resistance, and reduced pleasure. The impacts of culture and society, the media, role models, social networking, drug use, and risk-seeking behavior on safer sex are assessed. Currently, supplying condoms and providing voluntary testing and counseling is the primary mode of preventing the spread of HIV/AIDS, but this study sheds light on the critical issues of condom availability, perceived benefits and barriers to condom use, and the disconnect between belief and behavior regarding HIV/AIDS and unprotected sex among MSM in the Philippines.

## Opsomming

Die doel van hierdie studie is 'n ondersoek na die gelowe (beliefs) teenoor MIV/Vigs van mans wat seks het met mans. Die studie poog verder om ondersoek in te stel na moontlike voorkomende maatreëls wat ingestel kan word om die pandemie te bekamp.

Vir die doel van hierdie studie is 'n vraelys ontwikkel, deur gebruik te maak van die Health Belief Model, met die doel om 'n beter begrip te kry van die redes vir

risikogedrag onder mans wat seks het met mans in die Filippyne. Die voorkoms van MIV/Vigs by mans wat seks het met mans is steeds aan die toeneem in die Filippyne en dringende maatreëls is nodig om die groei van die pandemie te beperk.

Die studie gee 'n agtergrond tot MIV/Vigs in die Filippyne. Die ondersoek gaan dan voort om te probeer bepaal waarom risikogroepe steeds voortgaan om aan onbeskermdede seksuele aktiwiteite deel te neem.

Resultate van die studie toon aan dat daar verskeie faktore is wat die gebruik van kondome ontmoedig in die risikogroep wat in hierdie studie aangespreek word.

Kondome is nie altyd beskikbaar nie; seksuele vennote wil nie kondome gebruik nie en die vermindering in seksuele plesier word as redes aangevoer.

Hierdie studie maak 'n betekenisvolle bydrae tot die kennisbasis van die gelowe en houdings van mans wat seks het met mans (en dan MIV-positief raak) en sal na alle waarskynlikheid betekenisvol bydra tot die meer suksesvolle bestuur van hierdie risikogroep in die Filippyne.

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## Chapter 1: Background

The first cases of HIV/AIDS in the Philippines occurred in the early 1980s (Bardhan, 2001). The story of HIV/AIDS in the nation begins in 1984, when the first two cases of the disease were reported (Salvana, 2010). Since then, HIV/AIDS diagnoses have grown rapidly among particular subgroups of the population, including Men who have Sex with Men (MSM), sex workers, foreign and migratory workers (Acaba, 2014; Ogena, 2004). Among MSM, HIV infection appears to be growing at a near exponential rate, as in “2012...HIV prevalence among MSM was 1.7 percent, showing an increase from 0.99 percent, 0.28 percent in 2007, and 0.11 percent in 2003.” (Solares, 2012:2). The overall rate of HIV/AIDS is less than 1% in the Philippines (Solares, 2012).

The Philippines has a conservative culture and a long history of Catholicism, a religious tradition that has condemned both condom use and homosexuality (Hookway, 2011; Lucea, Hindin, Gultiano, Kub, & Rose, 2013). Over 80% of the population identifies as Catholic, with a majority of people expressing religious belief, and over half attending spiritual service weekly (Lucea et al., 2013; Sandoval, Mangahas and Guerrero, 1998). During the most recent papal visit in 2015, the issue of government-provided contraception formed an area of division between the president and the leader of the Catholic faith (Gotera, 2015). Although public policies that encourage condom use by providing free contraception would likely stem the spread of HIV/AIDS, the conservative culture of the Philippines is resistant to such programs. The Philippine “Department of Health [showed] that a mere 0.73 percent of women and men aged 15-49 underwent VCT and were informed of the results in the past 12 months, while only 8 percent of males having sex with males underwent HIV testing and knew the results” in 2014 (InterAksyon.com, 2014, para. 4). In honor of World AIDS Day, religious leaders in the Philippines underwent VCT as a sign of solidarity with those who might be intimidated by the process of HIV/AIDS testing (InterAksyon.com, 2014). Further collaboration between religious and community leaders and the government, as well as LGBT activism groups will improve the efficacy of VCT and other preventative interventions to reduce the spread of HIV/AIDS.

The alarming rise of HIV/AIDS cases among MSM exposes the need for preventative measures in the area of public health. Healthcare organizations,

governments, businesses, and community leaders are concerned about the spread of HIV/AIDS and are committed to finding the best ways to minimize public and individual risks and harms related to HIV/AIDS. Individuals face a variety of barriers that may prevent them from engaging in safer health behaviors. The magnitude of the HIV/AIDS problem in the Philippines is intensifying. It is disproportionately impacting the MSM community. Since 2007, eight out of ten new HIV cases were in individuals who are MSM. In July 2014, the Philippine Department of Health's National Epidemiology Center reported a record breaking 585 new HIV cases, an increase of approximately 20% from the previous month. From January 2014 to July 2014, there were a total of 3,399 new HIV cases reported, 10% of which were AIDS cases.

These cases represent 17% of all HIV cases reported in the Philippines since 1984. If the trend continues in the coming months, 26% of the total reported HIV cases in the history of the Philippines will have been accounted for in 2014 alone. A significant portion of the new HIV infections can be attributed to young Filipino MSM aged 18 to 35 and living in the Metro Manila area (Acaba, 2014; Gangcuangco, Tan and Berba, 2013). In 2012, MSM in the Philippines had nearly 17 times the rate of HIV infection compared to the general population (Solares, 2012). Only 5% of MSM had an HIV test within the past year (Solares, 2012). Some of these people continue to engage in unprotected penetrative sex despite having undergone voluntary HIV counseling and testing and testing negative for HIV. Migrant workers are particularly at risk for HIV infection (Ogena, 2004). The most recent statistics for the total number of HIV and AIDS cases are 5,010 HIV/AIDS cases in 2014, "since 1984, the [Department of Health]...recorded 21,526 HIV cases...1,971 of them [resulting in]...AIDS, with 1,091 deaths." (Crosotomo, 2014, para. 7-8).

Despite "pre-departure orientation seminars for would-be [migrant workers that] already touch on the HIV/AIDS issue," these seminars do not address "the social-cultural changes and adjustments attendant to migration which would make migrant workers vulnerable to HIV/AIDS, nor equally important issues relating to health, gender and sexuality" (Ogena, 2004, p. 304). Interventional programs to prevent HIV/AIDS have thus far been unable to reduce the growth of HIV/AIDS infection rates among MSM.

These difficulties apply to screening for domestic employees as well, as educational interventions can only go so far to encourage healthy behaviors among those at risk for HIV/AIDS. One worker who contracted HIV/AIDS overseas while working overseas stated that “care and support ang kailangan naming, eg (dahil sa ginawa nila sa amin), parang hindi kami tao eh. Kailangan naming eh unawa at suporta, lalo na mula sa gobyerno” (Ogena, 2004, p. 304). This plea for help from the government demonstrates the problems that workers experience related to a lack of knowledge and support related to HIV/AIDS. However, the highest risk category for new HIV/AIDS cases in the Philippines is no longer found in the population of overseas workers or female sex-workers, but among MSM (Trivedi, 2013). Many of the same issues that complicated the argument over preventing HIV/AIDS among guest workers and sex workers continue to affect the debate about policies that target MSM. Metropolitan Manila has been consistently identified as an epicenter of LGBT culture, social and sexual activity between MSM, as well as an area with elevated levels of new HIV and AIDS cases.

This study will examine the reasons why Filipino MSM aged 18 to 35 in Metro Manila continue to engage in unprotected penetrative sex despite having undergone voluntary HIV counseling and testing and testing negative for HIV. This study is intended to address the gap between knowledge, beliefs, and behaviors, with the end goal of finding out how to reduce the incidence of unprotected penetrative sex among young Filipino MSM, thus lowering the risk of HIV transmission in this population. An estimated 6,360 MSM need anti-retroviral treatment as of 2012 (Solares, 2012). The relatively high rate of current HIV seroprevalence and increasing number of cases each year among MSM lead to the study’s research problem. Champion and Skinner (2008) contend that the health belief model is one of the most widely utilized theories for understanding human cognition and behavior related to health. The model has been modified throughout the years to include Bandura’s (1990) theory of self-efficacy, and different instruments based on the health belief model have been designed to study diseases such as addiction and risky behaviors like smoking.

Despite low levels of HIV/AIDS overall, as of 2013, a new HIV/AIDS diagnosis occurs “every three hours” in the Philippines, and one estimate finds that the nation may

have 50,000 people living with HIV/AIDS by the year 2016 (Trivedi, 2013). Vulnerable populations are defined as social groups with a higher propensity for poor health outcomes (Rawlett, 2011). The HBM theory was developed in order to better understand why individuals pursue risky behaviors. As MSM form the highest risk category for HIV/AIDS, public health interventions that target the beliefs and actions of MSM may help to stem the spread of HIV/AIDS in the Philippines over the next decade.

### **1.1 Research Problem**

The spread of HIV/AIDS in the Philippines has reached a critical flashpoint. MSM aged 18-40 are the most likely group to experience new HIV/AIDS infections and to spread the disease further among the general population. Thus, because their risk is so high compared to other segments of the Filipino population, targeted interventions that address MSM must be devised based on the risk factors and beliefs of this specific group of individuals. Previous research into the health beliefs of MSM in the Philippines, in Asia, and more broadly has yielded numerous discoveries about the reasons that MSM may choose to engage in unsafe or risky sexual or other health-related behaviors. Predominant themes among those who object to safe sex include the perception of reduced sensation, the trust and approval of their partner(s), the lack of availability for condoms, poor fit or breaking, and ruining spontaneity or the heat of passion. According to the HBM, those who choose to use condoms tend to believe that the risk of HIV/AIDS is severe and that condoms are an effective method of avoiding contracting HIV/AIDS or any STI. Choosing safe sex may alleviate guilt and lead to feelings of safety, security, and mutual trust.

The rate of HIV/AIDS among MSM in the Philippines is quickly increasing. Some young Filipino MSM aged 18 to 35 living in Metro Manila continue to engage in unprotected penetrative sex after having undergone voluntary counseling and testing and having obtained a negative HIV test result. This study is a response to the need for solutions to the burgeoning problem of HIV/AIDS in the Filipino MSM community.

### **1.2 Research Questions**

The problem of HIV/AIDS in the Philippines is growing, and MSM make up the majority of new HIV cases each year. Based on these facts, this study will inquire about

the beliefs of MSM in Metro Manila related to HIV/AIDS risks and condom use by answering the following questions:

RQ1: To what extent do study participants report self-efficacy related to condom use?

RQ2: To what extent do study participants report perceived barriers related to condom use?

RQ3: To what extent do study participants report perceived benefits related to condom use?

RQ4: To what extent do study participants report HIV / AID severity?

RQ5: To what extent do study participants report HIV / AIDS susceptibility?

RQ6: To what extent, if any, are there correlations between self-efficacy related to condom use, perceived barriers related to condom use, perceived benefits related to condom-use, self-reported HIV / AIDS severity perceptions, and self-reported HIV / AIDS susceptibility evaluations?

RQ7: What are the main condom use attitudes emerging from the survey?

The research questions will serve as a means of gathering data about a little-understood phenomenon, condom use in MSM contexts in the Philippines.

### **1.3 Study Significance**

The Philippines will benefit from this study since HIV cases are increasing, with HIV/AIDS approaching an epidemic state in the country. Among MSM, nearly 35% reported vaginal sex within the past month, indicating that HIV/AIDS is not simply a health issue for men or homosexuals, but instead affects all members of society, including women and children (Solares, 2012). In order to determine the obstacles that MSM in the Philippines face when deciding whether to have protected or unprotected sex, a quantitative and qualitative survey rooted in the HBM was administered to MSM (n=45) who have undergone VCT and tested negative for HIV/AIDS, but continue to state that they engage in unprotected sex.

The field of counseling will benefit from an increased understanding what areas of belief to focus on to promote behavior change. The Philippines Department of Health will benefit with respect to their goal of reducing the number of new infections in the

country. The researcher will personally benefit from this study because it may assist close friends and community members from to prevent HIV infection.

There is a lack of empirical research pertaining to HIV/AIDS risks among MSM in the Philippines, particularly among the high-risk subset of the population that continues to engage in unprotected intercourse despite knowledge of risks and preventative measures (Tan, 2012). By looking at the beliefs, attitudes, and behaviors of MSM related to safer sex, this mixed-methods survey will help government, healthcare, and private sector policymakers to formulate better strategies to address the HIV/AIDS epidemic in the Philippines.

#### **1.4 Aim and Objectives**

The primary aim of this study is to provide improved guidelines on how to reduce the incidence of unprotected penetrative sex among Filipino MSM aged 18-35 who live in Metro Manila. The following objectives will be achieved as part of this research study:

1. To establish participants' level of understanding regarding the consequences of engaging in unprotected penetrative sex.
2. To establish the perceived advantages and disadvantages of engaging in unprotected penetrative sex.
3. To determine the participant's perceptions of the availability and accessibility of condoms and water based lubricants.
4. To provide guidelines that will result in proper and consistent use of condoms and water based lubricants among this high-risk population of MSM.

These objectives can be achieved using a survey targeting the at-risk population. The study methodology and research design follow stringent academic guidelines and build on previous studies pertaining to HIV/AIDS health beliefs and behaviors.

#### **1.5 Summary and Transition**

The study has been structured as follows. Chapter 1 of the study focused on introducing the problem and some of its empirical and theoretical dimensions. Chapter 2, the review of literature, contains a more detailed overview of the dynamics of HIV use and sexual behavior in the Philippines. Because of the limited empirical knowledge of HIV in the Philippines, one of the focus areas in Chapter 2 is the generation of data that

cast light on how quickly HIV and AIDS have spread in the Philippines and how deadly AIDS is in terms of deaths. One of the outcomes of this empirical analysis was the formation of the hypothesis that AIDS is well-managed by anti-retroviral therapy, which in turn obliges policy-makers to change their safe sex messages in the Philippines. Chapter 3, the methodology, presents and defends the methodology used for the study. Chapter 4 contains a presentation and discussion of the findings from the study. Chapter 5, the conclusion, contains a summary of the findings, their relationship to past scholarly work, and their applicability to policy as well as future scholarship.



## Chapter 2: Literature Review

### 2.1 Overview of Theories

There are numerous theories of why people do or do not use condoms. One key theory is that of self-efficacy. Bandura (1997), the progenitor of self-efficacy theory, defined this attribute as follows:

Efficacy is a generative capability in which cognitive, social, emotional, and behavioral subskills must be organized and effectively orchestrated to serve innumerable purposes. There is a marked difference between possessing subskills and being able to integrate them into appropriate courses of action and to execute them well under difficult circumstances. People often fail to perform optimally even though they know full well what to do and possess the requisite skills to do it (pp. 36-37).

In self-efficacy theory, there is an assumption that people by and large possess the skills that they need to achieve a specific goal—such as putting on a condom—but that they often fail to orchestrate these skills into what Bandura referred to as appropriate courses of action.

One example of self-efficacy theory as applied to condom usage comes in empirical studies that have found a disparity between individuals' beliefs in the usefulness of condoms and actual individual actions. For example, Adih and Alexander (1999) and Varga (1997) found that two very different populations—youth and sex workers—both believed that condoms were useful and necessary, but both populations had a difficult time ensuring that they actually condoms available for every sexual encounter.

Self-efficacy theory is particularly useful for explaining how, even when people possess insight and other skills into the appropriateness of a specific behavior, they do not always succeed at actually displaying that behavior. In such cases, the point is not whether the individual believes in the usefulness of a behavior, but whether the individual is able to orchestrate all of the other actions necessary to actually manifest that behavior. For example, someone who both believed in the beneficial nature of condom use and was able to purchase and use condoms in every sexual encounter

could be described as having high self-efficacy. On the other hand, someone who believed in the beneficial nature of condom use but who not regularly purchase and use condoms would have low self-efficacy.

Self-efficacy only applies in cases in which individuals believe in the beneficial nature of condom use. Someone who does not want to use condoms cannot be accused of lacking self-efficacy when he or she does not procure or use condoms. The paradigm of self-efficacy only applies when attempting to explain why people who understand and appreciate the value of condom use do not use condoms as frequently as could be expected.

Deficits in self-efficacy have often been found to be deficits in confidence. In the context of condom use, there are many individuals who, while believing in condom use, are not confident enough to suggest such use to partners. Other deficits in self-efficacy related to condom use pertain to the disparity between decisions made in rational circumstances and actions carried out in the context of sexual passion. When study participants are asked about the beneficial nature of condom use, they respond in the context of rational decision-making; however, when participants are actually in sexual situations that require decisions about condom use, their rationality might clash with the emotional texture of their sexual encounters. Sex is a well-documented anti-rational force, with people who are about to pursue sex being particularly likely to disregard decisions made in more rational moments.

Self-efficacy is only one possible theory of decision-making. The contemporary consensus on decision-making is as follows; First, theorists acknowledge that human decisions are multi-tiered in that they can reflect inputs from the rational, emotional, and instinctual parts of the human brain in a dynamic and unpredictable way (Yair Aharoni & Connelly, 2011). Second, decision theorists generally acknowledge the impossibility of a predictive science of decisions; because humans' brains are highly different from each other, it is highly unlikely that a single model can account for how all people make decisions in all kinds of contexts (Gambetti, Fabbri, & Luca Bensi, 2008). There is a pronounced respect in the literature for different kinds of agency in human decision-making, an acknowledgement except among radical behaviorists that people make decisions at least partly freely and in a manner that cannot necessarily be predicted

(Nassar, Abdou, & Mohmoud, 2011). Third, decision theorists believe that people's decisions emerge from a complex interaction between internal and external phenomena (Nassar et al., 2011).

A model of particular relevance within condom use theory is the theory of planned behavior (Ajzen, 2005; Herath, 2010; MacIntyre, Clement, Dornyei, & Noels, 1998). The theory of planned behavior suggests that the behavior of the individual sexual decision-makers can be conceptualized as the tip of a pyramid whose base consists of social and individual context, cognitive and emotional context, motivation, behavioral antecedents, and intentions (MacIntyre et al., 1998). Each of these layers informs the decisions made by individuals in sexual and other settings. It should be noted that the theory of planned behavior is delimited to more complex forms of decision-making; it is not designed to apply to decisions made purely out of biological instinct, or to non-volitional decisions such as reflexes. Within this domain, the theory of planned behavior has a great deal of explanatory power (Ajzen, 2005).

MacIntyre et al. (1998) suggested that decision-making behavior emerged from the interaction of five factors. Each of these factors builds upon the last. What cannot be known from such a model, according to MacIntyre et al., (1998) are the following: (a) Which of the factors has more power in determining the decision-making behavior and (b) how exactly the factors interact with each other. Models of planned behavior remain agnostic about these questions, partly because of the limitations of science itself. Human behavior is not predictable in the same way as other phenomena; human decisions cannot yet be reduced to a series of specific physical activities in the brain; and the interaction between the individual human and society is too complex, non-linear, and dynamic to be modeled in any known form of mathematics. With these limitations aside, the model has significant explanatory power as a schema for decision-making related to condom use.

Table 2.1

*Theory of Planned Behavior*

<b>Layer</b>	<b>Components</b>
VI: Social and Individual Context	Intergroup climate Personality
V: Affective-Cognitive Context	Intergroup attitudes Social situation Competence
IV: Motivational Propensities	Interpersonal motivation Intergroup motivation Self-confidence
III: Situated Antecedents	Organizational constraints or environment
II: Behavioral Intention	Willingness to make decision
I: Decision-Making Behavior	The decision itself

Social and individual context refer to the combination of social norms and personality variables thus accounting for the differences in people and society, and acknowledging the eventual impact of these variables on an individual decision. The affective-cognitive context focuses on (a) social attitudes which arise from the social climate; (b) the social situation which can refer to the specific dynamics between sexual agents; and (c) the competence of the decision-maker, which can be a limiting factor on the eventual decisions taken. Motivational propensities refer to how much an individual, small social group such as sexual dyads, , or society itself are vested in a specific outcome, and willing to regulate or alter their behavior to achieve this outcome.

Motivation can intensify or lessen commitment to a specific behavior and is a powerful variable in decision-making theory. Behavioral antecedents are in the model to account for the influence of environmental stimuli on decision-making, which can be powerful. Finally, behavioral intention is what emerges out of the categories of social and individual context, affective-cognitive context, motivational propensity, and situated antecedents. Intention ultimately leads to action, unless it is thwarted by an unforeseen obstacle. This model is a simple, widely-accepted (Ajzen, 2005; Herath, 2010) representation of the emergence of decision-making behavior, one that accommodates the influences of cognitivism, behaviorism, and social / organizational influence.

The theory of planned behavior is highly applicable to studies of condom use. Starting at Level VI, Social and Individual Context, condom use or non-use is influenced both by the characteristics of the environment and of the individual. For example, a city in which condoms are not easily available has a climate that is hostile to condom use, and this climate is more likely to exercise cascading effects that end in non-use of a condom by an individual. Similarly, a person who has a risk-taking and impulsive personality is more likely not to use a condom, regardless of what takes place later in later layers of the planned behavior chain.

Self-efficacy can probably be placed in either or both Layer V and Layer IV of the planned behavior model, where it can overlap with competence and self-confidence. In terms of Layer V, there are two main forces, affect (emotion) and cognition (reason) that, in turn, influence the motivation of an individual to use a condom or not. In sexual situations, affect is particularly strong in the heat of passion, when the quality of decisions is likely to be subordinated to emotional and physical needs. However, there is also a cognitive context to such situations. Individuals regularly make reasoned decisions about using a condom, even in the heat of passion, and some show a propensity to refuse sex when a condom is not available.

What matters, from the perspective of condom use theory, is weighing the affective and cognitive forces that are at play in any given encounter, which, in turn, requires taking a look back at individual personality and the context of the social setting discussed in Layer VI of the planned behavior theory. Some theorists have suggested that MSM activity is more likely to be impulsive and promiscuous than, for example,

monogamous heterosexual activity. If so, then it is particularly important to consider the influence of affect in MSM sexual contexts, and how this influence might reduce partners' affinities for condom use.

In Layer IV of the planned behavior model, condom use can be understood in terms of an individual's confidence in the decision to use a condom and the sexual dyad's motivation to use a condom. If one individual is confident, but a partner is not, then the decision to use a condom will depend on whether the individual who wants to use a condom is willing not to do so in order to be able to have sex. When both partners are in agreement over the necessity for condom use, then it is highly likely that condom use will actually take place.

Level III of the planned behavior model, Situated Antecedents, is the level at which the availability of a condom becomes important. If a condom is actually available, then it is more likely to serve as a bridge between Layers VI-IV and Layer II, Behavior Intention. On the other hand, if a condom is not available, then it has to be procured. Procuring a condom can be difficult given the general social environment (as in Layer VI), and it can test the motivational propensities of a sexual dyad in which one partner wants to use a condom but the other does not. On the other hand, easy availability of a condom can build the confidence of a partner or partners who want to use the condom.

Self-efficacy also applies to Layer II, Behavioral Intention, which the level at which an individual forms a decision to use a condom. An individual can have a condom and all of the accompanying reasons for using one, but, for one reason or another, could still fail to use a condom in the heat of the moment.

Finally, Layer I of the planned behavior model is the manifestation of the behavior itself. Obviously, in the context of condom use, the behavior is either the use or non-use of the condom. The main contribution of the planned behavior model (and of the theory of self-efficacy, which, as explained above, can fit into several layers of the planned behavior model) is the illustration of all of the factors that come before, and inform, the decision itself.

The instrument designed for this study, and discussed at length in Chapter 3, gathered data relevant to various concepts of decision-making, including self-efficacy (which was one of the sub-scales in the survey administered for the study). If

researchers hope to understand and influence condom use, then they need to understand the theories behind condom use.

According to Henderikus (2010), a theory “is normally aimed at providing explanatory leverage on a problem, describing innovative features of a phenomenon or providing predictive utility” (p. 1498). In this study, theories of decision-making are applied to (a) determining how, why, and when men in MSM settings use or do not use condoms; and (b) predicting what steps can be taken to increase the use of condoms in MSM settings. Insights from decision-making theory were utilized to create the study survey.

## **2.2 Health Belief Model**

The Health Belief Model (HBM) has been used to understand the perceptions of individuals and populations regarding the risks and responses to potential diseases, including HIV/AIDS (Champion and Skinner, 2008). Targeted interventions based on the health belief model enable healthcare providers or counselors to modify the behavior of individuals at risk for HIV/AIDS (Champion and Skinner, 2008).

The HBM theoretical framework is supported by empirical research in terms of internal construct consistency, but some authors identify a disconnect between beliefs and actions (Taylor et al., 2006). Generally speaking, the HBM predicts that the perception of high personal risk, combined with a strong belief in the efficacy of prevention, will lead to less risky health behaviors. Conversely, those who perceive a low risk and poor effectiveness of interventions will be less likely to reduce their risky health behaviors.

According to Tan, (2012, “Here is what’s worth highlighting”) “a main driver of the HIV epidemic in the Philippines is the continuing high prevalence of HIV among... [MSM], largely due to the noted high prevalence of unsafe behaviors among the members of this key population at higher risk.” In the Philippines, the cultural attitudes toward MSM exhibit regional differences that are particular to the islands (Solares, 2012). For example, “in regard to cultural factors in sexual risk-taking, machismo, sex-negative attitudes, issues of self-worth, and folk health beliefs all play a role in constructs of safety and risk” (Solares, 2012: 2). Individuals may identify as gay, bakla, or pa-girl, or may refrain from identifying with any specific label (Solares, 2012). Some

terms may be preferable by MSM from different contexts, as “the term ‘gay’, for instance, is perceived to be more respectable over ‘bakla,’ since the latter connotes being a ‘parlorista’ (parlor gay), which...is often associated with those coming from lower economic strata” (Solares, 2012). This demonstrates how, aside from masculinity and femininity, class and economic status play into the self-identification of MSM.

Men in the Philippines who take part in gay culture may also utilize “Swardspeak,” whereby common words are transformed into slang by accentuating or transposing syllables, thus identifying the user as a member of the subculture (David, 2014).

### **2.3 Unprotected sex among Filipino MSM 18-35 in Metro Manila**

Recent studies have reported an increase of HIV/AIDS in the general public of Metropolitan Manila. The disease that was once found more prevalently among MSM and intravenous drug users is now crossing over into the more socially acceptable community. Female sex workers could cause the virus to spread faster due to unprotected sex and sex with multiple partners. “The Department of Health (DOH) registered 537 new HIV cases and 59 AIDS cases with 17 deaths last October. The figure brought to 5,010 the total number of HIV/AIDS recorded cases in the country this year.” (Crisostomo, 2014) Church organizations are advocating non-traditional beliefs such as the Prevention NOT Condemnation campaign, supporting those who are perceived as more susceptible to HIV/AIDS. These types of programs are a step toward educating Filipinos in the risks and prevention of HIV/AIDS.

According to heteronormative models of LGBT behavior, sex between men can be dichotomized: “the inserter in anal sex is the masculine Top and the receiver of the act, the inserter, the effeminate Bottom” (Acaba, 2014, p. 103). However, the sexual dynamics between MSM cannot be simplified or reduced to categories defined by biological sex, gender identity, or sexual role (Acaba, 2014). In the Philippines, most men involved in the online MSM community are age 18-35 and live in Quezon City, Manila, or Makati City (Acaba, 2014). Thus, this age group is an appropriate range to study in order to understand health beliefs related to HIV/AIDS. Roughly two thirds of Filipino MSM identify as bisexual, and one third identify as gay (Acaba, 2014).

According to Gangcuangco et al., (2013: 815) “[t]he HIV epidemic in the Philippines



is catalyzed by persistently low condom use and high risk-taking behavior.” Receptive anal partners, or bottoms, may have a higher risk for HIV/AIDS. Sustained HIV research data proposes that men who have sex with men (MSM) are more susceptible to the risk of HIV if from low-income or middle-income countries. “Several studies suggest that HIV knowledge and the self-perceived risk for HIV infection may be low among MSM in LMIC” (Adam et al., 2009, p.1). However, research is too scarce to draw any definite conclusions in regards to men who sex with men in low-income or middle-income countries. The information needed to make any firm assumptions about men who have unprotected or protected anal intercourse is almost unattainable due to the limitations of standard research methods. Although southern Sub-Saharan Africa has been reported as the most AIDS affected region globally, there is very little data in regards to HIV among men who have sex with men. This is partially due to the inherent animosity towards homosexuality and the criminalization of same-sex expression in much of Africa. “To date, there have been published papers from only Senegal and Kenya describing HIV risk and prevalence among MSM in Africa.” (Baral et al., 2009, p.1) In an effort to obtain the proper health statistics and further educate people on the risks of anal intercourse there are collaborative groups developing methods implemented for LGBT rights groups. “The lack of data on MSM and HIV are paradoxically the most marked for the world’s highest prevalence zone; the southern region of Sub-Saharan Africa.” (Baral et al., 2009: 2) After a cross-sectional anonymous probe of 537 men it was determined that MSM are a high-risk group for HIV infection in Sub-Saharan Africa. “The HIV prevalence among those between the ages of 18 and 23 was 8.3% (20/241); 20.0% (42/210) among those 24–29; and 35.7% (30/84) among those older than 30 for an overall prevalence of 17.4% (95% CI 14.4–20.8)” among MSM (Baral et al., 2009). These figures demonstrate that men aged 24 and above have a higher risk for HIV/AIDS, likely due to having more sexual partners over their lifetime, and thus more opportunities for transmission. When looking at less developed nations, “country estimates of...condom use were found to diverge widely, ranging from 0%-82%, and no overall average was computed from country estimates.” (Adam et al., 2009, p.2).

## **2.4 Implications of HIV for Health**

Researchers' link perceived self-efficacy to health behaviors as part of the HBM (Bandura, 1990). HIV can impact an individual's health and wellness by reducing life expectancy and quality of life, as well as impacting others through transmission (Holtgrave & Pinkerton, 1997; Jahn et al., 2008; Jia, Uphold, Wu, Reid, Findley, & Duncan, 2004). Among MSM, HIV is often comorbid with other sexually transmitted infections, such as syphilis or herpes (Feng et al., 2010).

## **2.5 Availability and Accessibility of Condoms in Relation to Condom Use**

In 2012, 35% of MSM reported using a condom during their last sexual encounter, while 42% professed knowledge of prevention (Solares, 2012). This rate of condom usage is lower than the average among low and middle-income nations, which was an estimated 54% as of 2009 (Adam et al., 2009). The rate of condom usage among MSM is actually comparable to another high-risk population in the Philippines, heterosexual males who visit commercial sex workers; one study found a condom usage rate of 36% at baseline, and 33% knowledge about STI transmission (Morisky, et al., 2004). Although MSM are perceived to exhibit the highest level of risky health behaviors, the level of reported condom usage among MSM is on par with heterosexuals who are at high risk for HIV infection.

Despite programs in place to supply Metro Manila businesses, clinics, and high-risk areas with condoms, the availability of condoms remains a serious barrier to improving the rate of safer sex among MSM. For example, in the wealthy area of Alabang, a local law requires a prescription to buy condoms and extensive recordkeeping by shopkeepers, including recording the purchaser's full name (Hookway, 2011).

Poor availability of condoms and water based lubricant form two major barriers for encouraging safer sex among MSM (Baral et al., 2009). Although supplying condoms and water based lubricant is essential, merely providing these items without proper education about their proper usage can lead to misuse or misunderstanding (Baral et al., 2009).

The public HIV/AIDS discourse in the 1980s was heavily focused on the science of transmission and the characteristics of the virus. (Bardhan, 2001) Since the 1990s,

HIV/AIDS has somewhat receded from the global media as a cause for international concern (Bardhan, 2001). The media narrative surrounding HIV/AIDS is predicated on issues of international connections, as the virus has spread from Africa to nearly all corners of the globe (Bardhan, 2001). Although the overall rate of infection the Philippines may still be low, the situation in some ways resembles the West in the 1980s, when poor awareness of HIV/AIDS, high stigmatization, and the unavailability of proper sexual health information and aids like condoms and lubricant was largely the norm.

## **2.6 Barriers to Condom Use**

MSM and others who are at higher risk for HIV/AIDS report numerous barriers to condom usage, including the ideas that: partners may object to condom use, condoms are less pleasurable than unprotected sex, peers encourage unprotected sex, emotions can be an impediment to safe sex, safe sex is less pleasurable, there is a lack of social support, using drugs prevents safe sex, safe sex limits the availability of sexual partners, and unsafe sex is more enjoyable (Peltzer, 2000). The Philippines is one of the countries that has not faced a substantial HIV epidemic due to several factors including social and religious standards as well as geographical circumstances that have allowed for a moderate to slow spread of the virus. “The Philippines is an archipelago of more than 7000 islands and islets; its complicated geography and separateness from mainland Asia could aid in shielding it from the larger regional epidemic” (Farr, 2010) The majority of people infected by HIV/AIDS are largely segregated from the general public as they are commonly intravenous drug users (IDU). “ At present, there are only an estimated 10,000 IDUs in the Philippines (out of its population of 90 million people; that is, 0.01%)” (Farr, 2010). There is a very low use of condoms in the Philippines that can be attributed to highly conservative religious morals and sexual conservatism which may result in males having fewer partners throughout their lives. “However, fewer sexual partners is not necessarily a clear indicator of a smaller epidemic as reflected in China's expanding HIV epidemic despite reported sexual partner acquisition rates being similarly low” (Farr, 2010) Demographics show that there is an increase in infected adolescents in the Philippines which has led to concern of a trend among young people. This understanding supports the gradual increase of HIV/AIDS related cases in the Philippines over the succession of time. Although the Filipino government has acted

toward providing substantial health care initiatives and increased awareness for HIV, alongside HIV/AIDS prevention organizations, though these organizations are working to control the spread of the virus, it is nevertheless increasing among high-risk populations.

### **2.7 Partner Resistance to Condom Use**

When the lines are blurred between being a sex worker and a dating partner, for example, among female go-go dancers in the Philippines, condom use may be discouraged by social and contextual pressures (Ratliff, 1999). Some MSM report that partners are ambivalent about both condom use and the importance of knowing HIV status, this carelessness can also be a major turn-off (Tan, 2012). Commitment is a major issue for condom use, as the contexts of more serious relationships tend to pressure partners not to use condoms (Ratliff, 1999).

### **2.8 Availability of Sex**

Some studies have shown that condom usage presents barriers in terms of the perceived availability of sex partners (Peltzer, 2000). Men are more likely to use condoms with random partners than with consistent partners (Feng et al., 2010).

### **2.9 Peer Pressure**

Peers may pressure MSM to engage in riskier behavior than they normally would (Tan, 2012). Some MSM engage in risks or seek a change in aerostats in order to feel belonging and a sense of community (Tan, 2012).

### **2.10 Emotional Barriers to Condom Use**

Multiple emotional barriers are related to the (non-)use of condoms among MSM. These emotional factors include embarrassment, perceived self-efficacy, fear, passion, and other emotions associated with love, sex, and safety interventions like condoms (Peltzer, 2000). An individual's level self-efficacy indicates the likelihood of utilizing condoms (Teng and Mak, 2011).

### **2.11 Pleasure-seeking Behavior**

The use of condoms may be perceived to reduce pleasure for oneself or his sexual partner. Reduced sensation is a major barrier to condom use. Additionally, the risk of unprotected sex itself may provide an added layer of pleasure or thrill (Tan, 2012). Men who feel that pleasure is a primary reason not to use condoms may be more likely

to use other methods of HIV/AIDS prevention (Golub, Kowalczyk, Weinberger, & Parsons, 2010).

### **2.12 Other Barriers to Condom Use**

One study of female bar workers in the Philippines found that workplace condom policies, including mandatory condom use and workplace availability of condoms improved condom use by 2.6 times compared to workplaces without such policies (Morisky, Peña Tiglao, & Liu, 2002). This suggests that the workplace milieu can act as a barrier or facilitator of condom usage. A workplace that promotes healthy sexual behaviors can significantly impact the behavior of its employees (Morisky et al., 2002).

The emergence of preexposure prophylaxis treatments, which aim to prevent HIV infection by administering daily medication, may actually increase the occurrence of unprotected sex (Golub et al., 2010). However, the current WHO recommendations include prophylactic ARV for all MSM.

### **2.13 Role Models and Celebrities**

The first Filipina woman to publicly acknowledge her HIV status, Dolzura Cortez, serves as a role model for young people who suffer from HIV/AIDS (Harvey, 1994). The film *Dahil mahal kita: The Dolzura Cortez Story*, tells the story of how Dolzura contracted HIV and eventually lost her life to the disease in 1992; she was one of fifty Filipinos who died from HIV/AIDS that year (Harvey, 1994). Celebrities such as athletes may play a role in affecting the beliefs of young people who could find themselves exposed to HIV/AIDS (Brown, Basil, & Bocarnea, 2003). International celebrities with a prominent role in the LGBT community in the Philippines such as Sebastian Castro have contributed to the fight against HIV/AIDS and unprotected sex among MSM by creating public service announcements and participating in media campaigns (Fly Love Yourself: How to Have Sex and Avoid HIV [feat. Sebastian Castro], 2013). BB Gandanghari and Aiza Seguerra are highly visible examples of celebrities who achieved fame prior to coming out as transgender. Vice Ganda and Boy Abunda are both major stars in the Philippines who are openly gay. Boy Abunda has brought the nation's attention to the HIV/AIDS epidemic by interviewing individuals fighting against HIV/AIDS such as Wanggo Gallaga.

### **2.14 Perceived Life Value**

MSM who do not value their lives may be more likely to engage in risky sexual behaviors (Tan, 2012). Those who have negative feelings following unprotected intercourse are more likely to engage in the practice repeatedly (Ekstrand, Stall, Paul, Osmond, & Coates, 1999). So-called bug chasers may be more likely to be bottoms (Tan, 2012). HIV+ MSM have a tendency to be receptive partners for unprotected anal intercourse and to practice unsafe sex with other HIV+ individuals (van Kesteren, Hospers, & Kok, 2007).

### **2.15 Drug Use**

A study of female commercial sex workers in the Philippines, who exhibit similar high risks for HIV/AIDS as MSM, found that the use of alcohol is strongly correlated with an increase in drug use and risky sexual behaviors (Chiao, Morisky, Rosenberg, Ksobiech, & Malow, 2006). Men who use inhaled nitrite drugs are more likely to engage in unprotected intercourse (Ekstrand et al., 1999). In Cebu City, nearly 2/3 of males who used injected drugs also reported never using condoms during sexual intercourse (Amadora-Nolasco, Albuero, Aguilar, & Trevathan, 2002). Drugs go hand-in-hand with risky sexual behaviors, and this is true among men in the Philippines who abuse drugs. Once again, a disconnect is observed between the beliefs and knowledge of drug users and their level of risky behaviors - despite recognizing the risks of needle sharing and unprotected sex, roughly two-thirds of the participants stated that they engage in sex without a condom and sharing needles between users (Amadora-Nolasco et al., 2002).

### **2.16 Risk-seeking Behavior**

Some MSM actually seek out HIV+ partners or risky sexual behaviors that will increase the likelihood of contracting HIV (Tan, 2012). So-called “bug chasers and gift givers” use the internet to meet partners who are interested in seroconversion (Tan, 2012, “It was in 2003”). Thus, risk may increase the thrill of MSM’s sexual behavior and may present a barrier to condom use that may be hard to overcome through counseling and education (Tan, 2012). Filipinos who engage in unsafe sex may be turned on by the risk, “in Filipino, ‘masarap ang bawal’” (Tan, 2012, “Secondly, there’s the supposed excitement”). Others see getting HIV as a way to overcome perceived barriers to having *unsafe* sex, as there is no worse consequence than HIV infection, in other words,

getting over the feeling of danger, “in Filipino, ‘para matapos na’” (Tan, 2012, “And fourthly”). Some bug- chasers want to belong to the HIV+ or larger gay community, and feel that contracting the disease could bring them closer to other men (Tan, 2012). Still others simply feel the risk prevented by HIV is low enough, due to the availability of life-prolonging treatment, that unsafe sex is acceptable (Tan, 2012).

### **2.17 Gay Social Media Applications**

Social media applications that cater to MSM, such as Grindr, Hornet, and Jack’d, Planet Romeo offer the opportunity to engage in potentially unprotected or otherwise unsafe sex with near-strangers (Acaba, 2014). Planet Romeo may offer those seeking high-risk sexual behaviors an outlet to meet partners who share these interests (Tan, 2012). For example, one user posted an ad that proclaimed his intention to engage in unprotected sex only, regardless of his or his partners HIV status (Tan, 2012). Grindr users have exhibited similar tendencies to engage in risky behaviors facilitated by online communication. The introduction of services like Craigslist has a negative effect on the sexual health of communities by increasing the rate of HIV infection (Chan & Ghose, 2015).

### **2.18 Voluntary Testing and Counseling (“VCT”)**

The effectiveness of VCT and immediate implementation of treatment are suggested by mathematical models that predict universal screening and treatment could shrink global HIV prevalence to 1% within 50 years (Granich, Gilks, Dye, De Cock, & Williams, 2009).

### **2.19 Knowledge about HIV and HIV Status**

Those who know their HIV status should be empowered to make behavioral changes that decrease their health risks (Rosenstock, Strecher, & Becker, 1994). However, in the United States, MSM report high levels of unprotected sex with men of unknown or discordant HIV status (Ekstrand et al., 1999). Knowledge of HIV prevention among MSM in the Philippines is 42%, which is close to the international average of 44% HIV knowledge among low to middle income nations (Adam et al., 2009). The perceived threat of HIV/AIDS in MSM and heterosexual men in the US is similar considering that both are fearful and view the virus as dangerous. However, there was a difference found in the perceived threat of sexual risky behavior but it is not believed



that these two notions are parallel. “There is no direct correlation between the perceived threat of HIV/AIDS and sexually risky behaviors.” (p.37) “The mean perceived threat of both groups indicated that the study population perceived HIV/AIDS to be a moderate to low level” (p.37) The perception of the threat of the HIV virus can vary depending on region as well as social, cultural, and religious standings. Reliable information is a decisive factor in the awareness of HIV risk and prevention and is crucial in the advancement of health knowledge.

## **2.20 Risk Reduction Techniques**

Numerous risk reduction techniques for HIV/AIDS exist, including knowing one’s status, communicating openly with partners, using condoms and lubricants, and choosing to engage in lower risk sexual behaviors such as protected sex, protected oral sex, or mutual masturbation.

Not having the proper influence or education about the practicalities of safe sex, many people in low-income countries have skewed perceptions on the matter. There are major components in the step toward direct self-change and better awareness of safe sex. One of these factors is knowledge and information focused on the awareness of health risks. In order “to achieve self-directed change, people need to be given not only reasons to alter risky habits but also the means and resources to do so.” (Bandura, 1990, p.1) Another fundamental component is perpetuating the idea and acceptance of preventive action. “Proficiency requires extensive practice and this is no less true of managing the interpersonal aspects of sexuality” (Bandura, 1990, p.6) Giving people an understanding and sense of self-worth by teaching skill enhancement and self-efficacy as well as the confidence to apply these skills in high-risk situations is an important part in maintaining the advance in health-related knowledge. “Efforts to encourage people to adopt health practices rely heavily on persuasive communication in health education campaigns” (Bandura, 1990, p.3) Ultimately, the effort needs social support and reliance for personal change, as “[p]eople effect self-directed change when they understand how personal habits threaten their well-being, are taught how to modify them, and believe in their capabilities to marshal the effort and resources needed to exercise control” (Bandura, 1990, p.7).



## **2.21 Proper and Consistent Condom Use**

The correct use of condoms is a major factor in preventing condom breakage and ensuring risk reduction through condom use (Feng et al., 2010; Tan, 1994). One study found that only 23% of men surveyed understood how to use condoms properly (Feng et al., 2010). Kincaid (2000) argues that media campaigns can increase positive beliefs about condom use, which is the main predictor of future condom use in addition to previous usage and conceptions. A TV campaign in the Philippines in the mid 1990s aimed at promoting the use of condoms had an estimated single spot recall rate of over 80% and led to around a 2% increase in condom use (Kincaid, 2000).

## **2.22 Measuring Effectiveness of VCT**

VCT has been shown to improve HIV-related health outcomes, by identifying those in need of treatment and assisting individuals, regardless of HIV status, to engage in lower risk behaviors related to HIV risk factors and encouraging HIV+ individuals to comply with treatment and minimize the risks of infecting others. However, some researchers find that VCT does not go far enough to prevent the spread of HIV/AIDS, suggesting that mandatory testing or more stringent methods to ensure treatment compliance may be warranted. However, violating the autonomy of patients constitutes a serious breach of medical ethics. The Department of Health has floated the idea of implementing mandatory testing for high risk subgroups, such as drug users, sex workers, or MSM, through revisions to the Philippine AIDS Prevention and Control Act; however, these proposals have met opposition from the LGBT community and caused division among HIV/AIDS activists, health professionals, and religious groups (Mateo, 2014; Punay, 2014).

## **2.23 Empirical Analysis of MSM Sexual Behavior in the Philippines**

Data collected by the HIV and AIDS Data Hub for Asia Pacific (2015) provided consider insights into a number of variables of interest in this study. There data include AIDS cases reported, AIDS deaths, asymptomatic AIDS cases, MSM prevalence rates, and unprotected MSM sexual behavior rates. The AIDS data go back to 1982; the MSM data, which are further sorted by age bracket and education, date from the early 2000s to 2010. These data are highly relevant to the study. However, the HIV and AIDS Data

Hub for Asia Pacific presented the data in raw tabular format, making them difficult to analyze.

An analysis of the growth of AIDS cases in the Philippines indicates that, while reported AIDS cases have grown year-over-year (from two in 1982 to 186 in 2012), the growth has not been strongly linear. The data indicate that AIDS cases have grown by about 2.544 cases a year, but the low  $R^2$  (0.355) of this model is a testimony to the weak linearity of growth. AIDS was almost non-existent in the Philippines for the first several years of the epidemic. It then grew exponentially and is still in a growth phase, according to data from the HIV and AIDS Data Hub for Asia Pacific (2015).

The very low  $R^2$  (0.001) of this model indicates that AIDS deaths have not grown over time. Indeed, there were more AIDS deaths in the Philippines in 1987 than there were in 2012. These data are a testimony to the effectiveness of HIV drugs that have made the disease much more survivable in recent years. The next regression is direct proof of the effectiveness of these drugs in the Philippines context.

When years are regressed on the number of asymptomatic AIDS cases in the Philippines, the results indicate that the number of such cases has increased by 57.518 per year, and that the increase is both statistically significant and has a moderate effect size ( $R^2 = 0.419$ ). The marked increase in asymptomatic cases is a measure of how well AIDS has been managed in the Philippines through the administration of the latest anti-retroviral drugs and related therapies.

Further proof of the effectiveness of AIDS treatment in the Philippines can be found when regressing the number of asymptomatic cases tracked by the HIV and AIDS Data Hub for Asia Pacific (2015) on the dependent variable of the number of AIDS deaths in the Philippines. This regression was not significant, which is another means of demonstrating that the percentage of asymptomatic cases that turn into terminal cases is very low, and therefore that drugs used to keep people with HIV asymptomatic are very effective. When the number of Philippines AIDS cases are regressed on the number of AIDS deaths, the regression is not, at an Alpha of .05, significant. This regression, too, solidifies the insight that AIDS deaths are disproportionately low in relation to the prevalence of the disease, once again affirming the effectiveness of

The HIV and AIDS Data Hub for Asia Pacific (2015) also tracked (a) the rate of MSM activity as a percentage of all sexual activity in a given year and (b) the rate of unprotected MSM sex. It tracked these data from 2002-2009, both in raw tabular format and in relation to the age and education levels of men who engage in MSM. The results revealed (a) younger Filipino men have higher reported rates of MSM behavior; (b) younger Filipino men have substantially higher rates of unprotected MSM sexual contact, which places them at much greater risk for HIV and other STIs; (c) unprotected sex rates are the same across different educational levels, indicating that, at least according to the HIV and AIDS Data Hub for Asia Pacific (2015) data, education does not isolate Filipino men from safe MSM activity; (d) past-year MSM prevalence rates are the same across different educational levels, indicating that, at least according to the HIV and AIDS Data Hub for Asia Pacific (2015) data, education levels do not predict the rate at which men engage in MSM.

## Chapter 3: Methodology

### 3.1 Introduction

The purpose of this section of the study is to describe and defend the methodology. The following areas will be addressed: (a) identification and justification of research design; (b) population, sample, and setting; (c) instrumentation; (d) data collection; (e) data analysis; (f) reliability, validity, and trustworthiness of findings; and (g) ethical concerns related to the study.

### 3.2 Choice and Justification of Research Design

There are numerous approaches to research design mentioned in the literature. The two basic approaches to research are quantitative and qualitative. In quantitative research, the focus is on mathematical analysis of the relationship between variables, whereas, in qualitative research, the focus is on examining variables in a more open-ended, subjective manner.

One of the problems identified in this study is the prevalence of risky sexual behavior among Filipino men who engage in MSM activity. Another, related problem is the absence of empirical insight into Filipino men's reasons for particular kinds of behavior. In looking at these problems, quantitative analysis seems well-suited to addressing the first of these problems, while qualitative analysis seems well-suited to addressing the second of these problems. In other words, the issue of behavioral prevalence is a problem of mathematical measurement, while the analysis of reasons and contexts of behavior is a subjective problem that can have no single, objective answer.

The table below contains McNabb's (2010) attempt to explain the basic difference between quantitative and qualitative research designs. The sections on ontology and procedures are particularly relevant to the use of mixed methods in the current study. Ontologically, the study contains both objective and subjective perspectives, whereas, procedurally, the study relies more on induction and subjective research techniques.

Table 3.1

*Basic Difference Between Quantitative and Qualitative Research Designs.*

Philosophical Foundations	Qualitative Research Designs	Quantitative Research Designs
Ontology (perceptions of reality)	Researchers assume that multiple, subjectively derived realities can coexist.	Researchers assume that a single, objective world exists.
Epistemology (roles for the researcher)	Researchers commonly assume that they must interact with their studied phenomena.	Researchers assume that they are independent from the variables under study.
Axiology (researchers' values)	Researchers overtly act in a value-laden and biased fashion.	Researchers overtly act in a value-free and unbiased manner.
Rhetoric (language styles)	Researchers often use personalized, informal, and context-laden language.	Researchers most often use impersonal, formal, and rule-based text.
Procedures (as employed in research)	Researchers tend to apply induction, multivariate, and multiprocess interactions, following context-laden methods.	Researchers tend to apply deduction, limited cause-and-effect relationships, with context-free methods.

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*Note:* Adapted from McNabb (2010, p. 225)

The problem of condom non-use in MSM settings in the Philippines is one that lends itself to both forms of research. Objective measurement and mathematical approaches are necessary to understand the scope of the problem; subjective

exploration is necessary to understand some of the dynamics behind the problem. Accordingly, in this study, mixed methods will be used.

### **3.3 Details of Research Design**

This cross-sectional mixed-method study utilized a single questionnaire with 30 Likert-style scale questions and five open-ended questions to ascertain the beliefs of Filipino MSM between 18-35. In order to participate, potential recruits had undergone VCT and tested negative for HIV, but reported continuing to engage in unprotected penetrative sex.

A sample of 45 males between the ages of 18-35 who met the participation requirements were selected from a local clinic that provides HIV VCT. All respondents were living in Metro Manila and returning for repeat VCT at a local HIV clinic. The University's Internal Review Board (IRB) and the director of the clinic provided assurance of appropriate ethical conduct. Participants provided informed consent to participate in this voluntary study, and received an explanation of the purpose of the study and the intent of the researcher. The survey questionnaire consists of 30 Likert-type scale items with a possible rating of 1-5 (see appendix A). Five additional questions allowed the participants an opportunity to express their beliefs related to HIV/AIDS and safer sex in a qualitative manner.

These potential study participants were previously tested at the same clinic or as part of the clinic's periodic community-based outreach activities. Each potential participant stated that he has engaged in unprotected penetrative sex at least once following his last VCT session. HIV Counselors assessed if their counseling clients met the above criteria during the risk assessment interview and invited clients to participate in this study while awaiting their test results. Participation was completely voluntary and anonymous. One questionnaire was used to cover all of the objectives of the study. The survey results were rendered anonymous through the use of case numbering. Inferential statistical procedures, in particular one-sample t-tests, were used to derive findings from the data.

### **3.4 Survey Questions and Sub-Scales**

The follow table lists the survey questions of the study and associates them with sub-scales:

Table 3.2

*Association of Survey Questions with Sub-Scales*

<b>Question</b>	<b>Subscale</b>
I believe that the chances of contracting AIDS can be significantly reduced by using a condom	Benefits
I think it is worth the effort to have condoms readily available	Benefits
I feel that the chances of contracting AIDS can be reduced by having sex with only one partner	Benefits
If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom	Benefits
I feel that the chances are good that I can get AIDS	Susceptibility
I am afraid that I might contract AIDS	Susceptibility
I believe that I can be exposed to HIV infection if my sex partner is heterosexual	Susceptibility
I believe that I can get AIDS even if I am only having sex with one partner	Susceptibility
If I decided to have sexual intercourse with a partner I would use a condom prevent infection	Severity
I would rather have any other terminal illness than AIDS	Severity
I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS	Severity
AIDS is probably the worst disease a person can get	Severity
Using a condom seems like an insult to my partner	Barriers
It is embarrassing (to me) to buy condoms	Barriers
I do not enjoy (or think I might not enjoy) sex when using a condom	Barriers
I would offer first-aid to an AIDS patient because I would feel guilty not offering help	Barriers

Confident to put on a condom	Self-efficacy
Confident to purchase condoms	Self-efficacy
Confident to carry a condom	Self-efficacy
Confident to discuss condom usage	Self-efficacy
Confident to suggest using condoms	Self-efficacy
Confident to maintain an erection while using a condom	Self-efficacy
I am not embarrassed to put a condom on	Self-efficacy
I am not afraid of rejection when suggesting condom use	Self-efficacy
Confident to use a condom correctly	Self-efficacy
Confident to use condom without reducing sexual sensations	Self-efficacy
Confident to use condom after drinking or using drugs	Self-efficacy
Confident to put condom in the heat of passion	Self-efficacy

### 3.5 Ethical Considerations

Studying HIV/AIDS, particularly in lower income countries, can present ethical challenges regarding informed consent (Mystakidou, Panagiotou, Katsaragakis, Tsilika, & Parpa, 2009). The study is guided by cultural and academic norms (Mystakidou, 2009). Participation in the study was completely voluntary and anonymous and informed consent was obtained from all respondents (Woodsong and Karim, 2005).

Respondents were handed the questionnaire and given basic instructions on how to fill it out properly. Participants completed the questionnaire in a private counseling room with no one else present. Completed questionnaires were placed by the respondents in a sealed box to ensure anonymity and confidentiality. The researcher retrieved the questionnaires and interpreted the results with no bias and full anonymity with no personal knowledge of the participants.



## Chapter 4: Results

### 4.1 Introduction

The statistical results of the survey are presented in this section.

The first inferential procedure was to conduct one-sample  $t$ -tests on the 29 questions of the survey that were scored according to the Likert scale. In each of these 29 questions, the neutral value (“not sure”) was three, so the test value was set to three. The purpose of these analyses was to identify those items in the scale that were scored significantly (at  $p < .05$ ) at more or less than three. Thus, the one-sample  $t$  test was capable of identifying those survey items on which participants had non-neutral opinions, which was useful in terms of evaluating participant opinions. Given the importance of understanding which participant opinions were not neutral, the one-sample  $t$  tests were the most important inferential procedure carried out in the study.

The second inferential procedure was to correlate the five sub-scales derived from the survey. Regressions were run on significantly correlated pairs.

The third inferential procedure was to conduct a one-way ANOVA with the independent variable being condom use in the past months and the dependent variable being scores on the sub-scales.

The fourth inferential procedure was to conduct regressions between (a) each item in the sub-scale and (b) the sub-scale to which it belonged. This procedure was a means of determining which survey items contributed more to their respective subscales. Examination of the  $p$  values,  $\beta$  coefficients, and  $R^2$  values of these regressions helped to establish which individual items were more determinative of their overall sub-scales. These findings were not only useful in explicating the relationship between survey items and survey sub-scales but also highly useful in generating targeted policy recommendations for Chapter 5.

Unless otherwise noted, the significance-level for all inferential procedures associated with the study was .05.

The survey results will be discussed in more detail, and with specific reference to the theories and empirical studies mentioned in the literature review, in Chapter 5, the conclusion.

## 4.2 One-Sample T Tests: Descriptive Statistics

Table 4.1

### *Presentation of Descriptive Statistics*

	N	Mean	Std. Deviation	Std. Error Mean
If I decided to have sexual intercourse with a partner I would use a condom to prevent infection	45	4.20	1.120	.167
I feel that the chances are good that I can get AIDS	45	2.80	1.440	.215
I am afraid that I might contract AIDS	45	3.13	1.502	.224
I believe that I can be exposed to HIV infection if my sex partner is heterosexual	45	3.13	1.575	.235
I believe that I can get AIDS even if I am only having sex with one partner	45	3.67	1.331	.198
AIDS causes death	45	2.96	1.745	.260
I would rather have any other terminal illness than AIDS	45	2.62	1.353	.202
I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS	45	2.47	1.424	.212
AIDS is probably the worst disease a person can get	45	2.22	1.396	.208
I believe that the chances of contracting AIDS can be significantly reduced by using a condom	45	4.76	.435	.065
I think it is worth the effort to have condoms readily available	45	4.73	.495	.074
I feel that the chances of contracting AIDS can be reduced by having sex with only one partner	45	4.27	1.176	.175
If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom	45	4.09	1.145	.171
Using a condom seems like an insult to my partner	45	1.89	1.229	.183
It is embarrassing (to me) to buy condoms	45	1.93	1.304	.194
I do not enjoy (or think I might not enjoy) sex when using a condom	45	2.29	1.342	.200
I would offer first-aid to an AIDS patient because I would feel guilty not offering help	45	4.18	.984	.147
Confident to put on a condom	45	4.56	.586	.087
Confident to purchase condoms	45	4.49	.727	.108
Confident to carry a condom	45	4.64	.609	.091
Confident to discuss condom usage	45	4.62	.576	.086
Confident to suggest using condoms	45	4.56	.624	.093
Confident to maintain an erection while using a condom	45	4.24	.830	.124
I am not embarrassed to put a condom on	45	4.60	.539	.080
I am not afraid of rejection when suggesting condom use	45	4.40	.720	.107
Confident to use a condom correctly	45	4.60	.495	.074
Confident to use condom without reducing sexual sensations	45	3.98	1.097	.164
Confident to use condom after drinking or using drugs	45	3.71	1.199	.179
Confident to put condom in the heat of passion	45	4.31	.900	.134

The calculation of item means, while helpful, did not indicate which items were significantly different from 3. The *p* values (designated *Sig.* by SPSS) in the next section established those significant differences, at  $p < .05$ . The significant differences are highlighted.

### 4.3 One-Sample T Tests: Inferential Statistics

Table 4.2

#### *Presentation of Inferential Statistics*

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
If I decided to have sexual intercourse with a partner I would use a condom prevent infection	7.187	44	.000	1.200	.86	1.54
I feel that the chances are good that I can get AIDS	-.932	44	.356	-.200	-.63	.23
I am afraid that I might contract AIDS	.596	44	.554	.133	-.32	.58
I believe that I can be exposed to HIV infection if my sex partner is heterosexual	.568	44	.573	.133	-.34	.61
I believe that I can get AIDS even if I am only having sex with one partner	3.359	44	.002	.667	.27	1.07
AIDS causes death	-.171	44	.865	-.044	-.57	.48
I would rather have any other terminal illness than AIDS	-1.873	44	.068	-.378	-.78	.03
I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS	-2.513	44	.016	-.533	-.96	-.11
AIDS is probably the worst disease a person can get	-3.737	44	.001	-.778	-1.20	-.36
I believe that the chances of contracting AIDS can be significantly reduced by using a condom	27.097	44	.000	1.756	1.62	1.89
I think it is worth the effort to have condoms readily available	23.469	44	.000	1.733	1.58	1.88
I feel that the chances of contracting AIDS can be reduced by having sex with only one partner	7.228	44	.000	1.267	.91	1.62
If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom	6.382	44	.000	1.089	.75	1.43
Using a condom seems like an insult to my partner	-6.065	44	.000	-1.111	-1.48	-.74
It is embarrassing (to me) to buy condoms	-5.488	44	.000	-1.067	-1.46	-.67
I do not enjoy (or think I might not enjoy) sex when using a condom	-3.555	44	.001	-.711	-1.11	-.31
I would offer first-aid to an AIDS patient because I would feel guilty not offering help	8.032	44	.000	1.178	.88	1.47
Confident to put on a condom	17.806	44	.000	1.556	1.38	1.73
Confident to purchase condoms	13.742	44	.000	1.489	1.27	1.71
Confident to carry a condom	18.118	44	.000	1.644	1.46	1.83
Confident to discuss condom usage	18.906	44	.000	1.622	1.45	1.80
Confident to suggest using condoms	16.733	44	.000	1.556	1.37	1.74
Confident to maintain an erection while using a condom	10.058	44	.000	1.244	1.00	1.49
I am not embarrassed to put a condom on	19.900	44	.000	1.600	1.44	1.76
I am not afraid of rejection when suggesting condom use	13.046	44	.000	1.400	1.18	1.62
Confident to use a condom correctly	21.664	44	.000	1.600	1.45	1.75
Confident to use condom without reducing sexual sensations	5.978	44	.000	.978	.65	1.31
Confident to use condom after drinking or using drugs	3.979	44	.000	.711	.35	1.07
Confident to put condom in the heat of passion	9.772	44	.000	1.311	1.04	1.58

The participants had non-neutral opinions on nearly every in the survey. Instead of discussing these non-neutral opinions on an item-by-item basis, they will be identified and discussed in the results pertaining to the five sub-scales derived from the survey.

#### 4.4 Correlation and Regression Analyses of Sub-Scales

There were five sub-scales in the survey, descriptive statistics for which are presented below:

Table 4.3

*Presentation of Descriptive Statistics According to Sub-Scales*

	N	Minimum	Maximum	Mean	Std. Deviation
Self-efficacy	45	39.00	60.00	52.7111	6.07761
Perceived barriers	45	5.00	16.00	10.2889	2.84143
Perceived benefits	45	14.00	20.00	17.8444	1.90640
Severity	45	4.00	20.00	10.2667	4.45380
Susceptibility	45	4.00	20.00	12.7333	4.78824
Valid N (listwise)	45				

The possible range for the sub-scales was as follows:

- Self-efficacy: 12-60
- Perceived barriers: 4-20
- Perceived-benefits: 4-20
- Severity: 4-20
- Susceptibility: 4-20

Based on these ranges, it was clear that participants had high self-efficacy and perceived benefits, and moderate perceived barriers, severity, and susceptibility. In other words, participants were able to: engage in and initiate healthy condom behavior; perceive the benefits of doing so; acknowledge the relatively low barriers to doing so; judge that the severity of AIDS was low (perhaps acknowledging the contemporary treatability of HIV); and position themselves to be less susceptible to HIV.

In order to identify possible relationships between these five subscales, correlation analysis was used. Significant (at  $p < .05$ ) correlations were then used as the

basis for regression. Regression was useful because it quantified the relationship between single-unit change in a sub-scale and change in another subscale.

Table 4.4

*Presentation of Correlation Analysis*

		Self- efficacy	Perceived barriers	Perceived benefits	Severity	Susceptibility
Self-efficacy	Pearson Correlation	1	-.545**	.431**	-.085	-.219
	Sig. (2-tailed)		.000	.003	.578	.148
	N	45	45	45	45	45
Perceived barriers	Pearson Correlation	-.545**	1	-.176	.119	.144
	Sig. (2-tailed)	.000		.247	.434	.344
	N	45	45	45	45	45
Perceived benefits	Pearson Correlation	.431**	-.176	1	-.437**	-.483**
	Sig. (2-tailed)	.003	.247		.003	.001
	N	45	45	45	45	45
Severity	Pearson Correlation	-.085	.119	-.437**	1	.628**
	Sig. (2-tailed)	.578	.434	.003		.000
	N	45	45	45	45	45
Susceptibility	Pearson Correlation	-.219	.144	-.483**	.628**	1
	Sig. (2-tailed)	.148	.344	.001	.000	
	N	45	45	45	45	45

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on the correlation analysis, the following significant ( $p < .05$ ) relationships held:

- Perceived barriers was negatively correlated with self-efficacy
- Perceived benefits was positively correlated with self-efficacy
- Perceived benefits was negatively correlated with severity
- Perceived benefits was negatively correlated with susceptibility
- Severity was positively correlated with susceptibility

These relationships offered useful insights into the data, and can be interpreted as follows:

- Individuals with higher self-efficacy perceived that the barriers to condom use were lower
- Individuals with higher self-efficacy perceived that the benefits of condom use were lower
- Individuals who perceived higher benefits of condom use also reported that AIDS / HIV was of lower severity; this finding was somewhat paradoxical, as it seems

more likely that people who perceived higher benefits of condom use would also have believed that the threat from HIV / AIDS was higher.

- Individuals who perceived higher benefits of condom use also believed themselves to be less susceptible to AIDS / HIV, perhaps because belief in the usefulness of condoms coincided with higher levels of condom use
- People who believed more in the severity of AIDS / HIV also believed themselves to be more susceptible, which raises a paradox of behavior: If these participants believe that AIDS / HIV is so severe, why are they engaged in more susceptible behavior?

The following regression equations were calculated based on these relationships. Note that each regression was significant (at  $p < .05$ ).

- Self-efficacy = (Perceived barriers)(-1.166) + 64.709 ( $R^2 = 0.297$ )
- Self-efficacy = (Perceived benefits)(1.376) + 28.164 ( $R^2 = 0.186$ )
- Severity = (Perceived benefits)(-1.020) + 28.471 ( $R^2 = 0.191$ )
- Susceptibility = (Perceived benefits)(-1.212) + 34.367 ( $R^2 = 0.233$ )
- Susceptibility = (Severity)(0.675) + 5.803 ( $R^2 = 0.394$ )

Note that the effect sizes of these relationships were relatively small.

#### 4.5 One-Way ANOVA, Sub-Scale Scores by Condom Use Status

Table 4.5

*Presentation of One-Way ANOVA*

		Sum of Squares	df	Mean Square	F	Sig.
Self-efficacy	Between Groups	216.760	4	54.190	1.539	.209
	Within Groups	1408.484	40	35.212		
	Total	1625.244	44			
Perceived barriers	Between Groups	18.252	4	4.563	.542	.706
	Within Groups	336.992	40	8.425		
	Total	355.244	44			
Perceived benefits	Between Groups	12.241	4	3.060	.829	.515
	Within Groups	147.670	40	3.692		
	Total	159.911	44			
Severity	Between Groups	165.834	4	41.459	2.346	.071
	Within Groups	706.966	40	17.674		
	Total	872.800	44			
Susceptibility	Between Groups	154.407	4	38.602	1.807	.146
	Within Groups	854.393	40	21.360		
	Total	1008.800	44			

Because none of the  $p$  values for the dependent variables was .05, variation in the frequency of condom use did not explain variation in the five sub-scales. In other words, sub-scale scores within each of the five condom frequency groups (never, infrequently, sometimes, frequently, and every time) were statistically indistinguishable. This finding is somewhat surprising. For example, it seems intuitive to assume that those who used condoms every time might have higher self-efficacy and lower susceptibility scores than those who never used condoms, but the ANOVA indicated that there were no such differences. A Tukey's post hoc test on the ANOVA data indicated that none of the condom frequency groups was significantly different than any other group in any of the five sub-scales.

#### **4.6 Selected Regressions between Individual Survey Items and Sub-Scales**

Thirty-two regressions were conducted for this portion of the analysis. In each regression, one survey item, treated as an independent variable, was regressed on the dependent variable of overall sub-scale score for the sub-scale to which the variable belonged.

Carrying out these regressions generated a great deal of insight into the relationship between individual attitudes and behaviors and the formation of larger patterns of behavior. Such insight is necessary for policy purposes in particular. For example, as disclosed earlier, analysis revealed the existence of moderate perceived barriers, severity, and susceptibility. Ideally, policy-makers should strive to further reduce perceived barriers and susceptibility while increasing severity. In order to do so, policy-makers need insights into exactly which items within each sub-scale are more influential in determining the overall sub-scale score. If each item within a sub-scale is equally determinative of the final sub-scale score, then policy-makers have a hard task, as they have to find some way of influencing each attitude or behavior individually. On the other hand, if some attitudes or behaviors happen to be highly determinative of their sub-scale scores, then policy-makers can target these attitudes and behaviors for special attention.

Because the presentation of all the possible regressions would consume unnecessary space, the following approach has been taken. For every sub-scale, only the most relevant regressions (that is, the regressions that are significant at  $p < .05$ ,

have a relatively high absolute  $\beta$  coefficient value, and a relatively high  $R^2$ ) will be presented, and the self-efficacy regressions will be summarized. Some of the lower-quality regressions will be discussed in the conclusion as part of the limitations of the study and as part of an argument to reject the perceived benefits sub-scale derived from the survey.

#### 4.6.1 Susceptibility regressions.

Stepwise regression was used to come up with the following analysis as reflected in the SPSS output below.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I feel that the chances are good that I can get AIDS <sup>b</sup>		.Enter

- a. Dependent Variable: Susceptibility
- b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866 <sup>a</sup>	.750	.744	2.42407

- a. Predictors: (Constant), I feel that the chances are good that I can get AIDS

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	756.127	1	756.127	128.678	.000 <sup>b</sup>
	Residual	252.673	43	5.876		
	Total	1008.800	44			

- a. Dependent Variable: Susceptibility
- b. Predictors: (Constant), I feel that the chances are good that I can get AIDS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.671	.797		5.858	.000
	I feel that the chances are good that I can get AIDS	2.879	.254	.866	11.344	.000



a. Dependent Variable: Susceptibility

Hence,

Susceptibility = (I feel that the chances are good that I can get AIDS)(2.879) + 4.671 ( $p < .05$ ,  $R^2 = 0.750$ ).

This survey item was highly predictive of overall susceptibility sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I am afraid that I might contract AIDS <sup>b</sup>		.Enter

a. Dependent Variable: Susceptibility

b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827 <sup>a</sup>	.684	.676	2.72344

a. Predictors: (Constant), I am afraid that I might contract AIDS

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	689.865	1	689.865	93.010	.000 <sup>b</sup>
	Residual	318.935	43	7.417		
	Total	1008.800	44			

a. Dependent Variable: Susceptibility

b. Predictors: (Constant), I am afraid that I might contract AIDS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.470	.948		4.715	.000
	I am afraid that I might contract AIDS	2.637	.273	.827	9.644	.000

a. Dependent Variable: Susceptibility

Hence,

Susceptibility = (I am afraid that I might contract AIDS)(2.637) + 4.470 ( $p < .05$ ,  $R^2 = 0.684$ ).

This survey item was highly predictive of overall susceptibility sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I believe that I can be exposed to HIV infection if my sex partner is heterosexual <sup>b</sup>		.Enter

- a. Dependent Variable: Susceptibility  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.833 <sup>a</sup>	.695	.687	2.67713

- a. Predictors: (Constant), I believe that I can be exposed to HIV infection if my sex partner is heterosexual

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	700.619	1	700.619	97.756	.000 <sup>b</sup>
	Residual	308.181	43	7.167		
	Total	1008.800	44			

- a. Dependent Variable: Susceptibility  
 b. Predictors: (Constant), I believe that I can be exposed to HIV infection if my sex partner is heterosexual

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.797	.896		5.351	.000
	I believe that I can be exposed to HIV infection if my sex partner is heterosexual	2.533	.256	.833	9.887	.000

- a. Dependent Variable: Susceptibility

Hence,

Susceptibility = (I believe that I can be exposed to HIV infection if my sex partner is heterosexual)(2.533) + 4.797 ( $p < .05$ ,  $R^2 = 0.695$ ).

This survey item was highly predictive of overall susceptibility sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I believe that I can get AIDS even if I am only having sex with one partner <sup>b</sup>		Enter

- a. Dependent Variable: Susceptibility
- b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742 <sup>a</sup>	.550	.539	3.24981

- a. Predictors: (Constant), I believe that I can get AIDS even if I am only having sex with one partner

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	554.667	1	554.667	52.519	.000 <sup>b</sup>
	Residual	454.133	43	10.561		
	Total	1008.800	44			

- a. Dependent Variable: Susceptibility
- b. Predictors: (Constant), I believe that I can get AIDS even if I am only having sex with one partner

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.956	1.434		2.062	.045
	I believe that I can get AIDS even if I am only having sex with one partner	2.667	.368	.742	7.247	.000

- a. Dependent Variable: Susceptibility

Hence,

Susceptibility = (I believe that I can get AIDS even if I am only having sex with one partner)(2.667) + 2.956 ( $p < .05$ ,  $R^2 = 0.550$ ).

This survey item was highly predictive of overall susceptibility sub-scale score.

#### 4.6.2 Susceptibility regressions.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	AIDS causes death <sup>b</sup>		.Enter

- a. Dependent Variable: Severity  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695 <sup>a</sup>	.483	.471	3.24023

- a. Predictors: (Constant), AIDS causes death

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	421.340	1	421.340	40.131	.000 <sup>b</sup>
	Residual	451.460	43	10.499		
	Total	872.800	44			

- a. Dependent Variable: Severity  
 b. Predictors: (Constant), AIDS causes death

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.024	.958		5.243	.000
	AIDS causes death	1.774	.280	.695	6.335	.000

- a. Dependent Variable: Severity

Hence,

Severity = (AIDS causes death)(1.774) + 5.024 ( $p < .05$ ,  $R^2 = 0.483$ ).

This survey item was moderately predictive of overall severity sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I would rather have any other terminal illness than AIDS <sup>b</sup>		.Enter

- a. Dependent Variable: Severity  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.794 <sup>a</sup>	.630	.622	2.73954

- a. Predictors: (Constant), I would rather have any other terminal illness than AIDS

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	550.081	1	550.081	73.294	.000 <sup>b</sup>
	Residual	322.719	43	7.505		
	Total	872.800	44			

- a. Dependent Variable: Severity  
 b. Predictors: (Constant), I would rather have any other terminal illness than AIDS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.415	.898		3.801	.000
	I would rather have any other terminal illness than AIDS	2.613	.305	.794	8.561	.000

- a. Dependent Variable: Severity

Hence,

Severity = (I would rather have any other terminal illness than AIDS)(2.613) + 3.415 ( $p < .05$ ,  $R^2 = 0.630$ ).

This survey item was highly predictive of overall severity sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
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1	I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS <sup>b</sup>		.Enter
---	--	--	--------

- a. Dependent Variable: Severity
- b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801 <sup>a</sup>	.641	.633	2.69926

- a. Predictors: (Constant), I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	559.502	1	559.502	76.791	.000 <sup>b</sup>
	Residual	313.298	43	7.286		
	Total	872.800	44			

- a. Dependent Variable: Severity
- b. Predictors: (Constant), I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.089	.812		5.037	.000
	I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS	2.504	.286	.801	8.763	.000

- a. Dependent Variable: Severity

Hence,

$$\text{Severity} = (\text{I would rather die from a violent death than from AIDS})(2.504) + 4.089 \quad (p < .05, R^2 = 0.641).$$

This survey item was highly predictive of overall severity sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
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1	AIDS is probably the worst disease a person can get <sup>b</sup>		.Enter
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- a. Dependent Variable: Severity
- b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736 <sup>a</sup>	.541	.531	3.05089

- a. Predictors: (Constant), AIDS is probably the worst disease a person can get

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	472.560	1	472.560	50.770	.000 <sup>b</sup>
	Residual	400.240	43	9.308		
	Total	872.800	44			

- a. Dependent Variable: Severity
- b. Predictors: (Constant), AIDS is probably the worst disease a person can get

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.051	.862		5.861	.000
	AIDS is probably the worst disease a person can get	2.347	.329	.736	7.125	.000

- a. Dependent Variable: Severity

Hence,

Severity = (AIDS is probably the worst disease a person can get)(2.347) + 5.051 ( $p < .05$ ,  $R^2 = 0.541$ ).

This survey item was highly predictive of overall severity sub-scale score.

### 4.6.3 Perceived benefits regressions.

Every item in the previous two sub-scales (susceptibility and severity) was at least a moderately significant predictor of its sub-scale, with  $R^2$  values close to or exceeding 0.500. For perceived benefits, only item satisfied this criterion.

Model	Variables Entered	Variables Removed	Method
1	If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom <sup>b</sup>		Enter

- a. Dependent Variable: Perceived benefits  
 b. All requested variables entered.

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.663 <sup>a</sup>	.439	.426	1.44424

- a. Predictors: (Constant), If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom

#### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.220	1	70.220	33.665	.000 <sup>b</sup>
	Residual	89.691	43	2.086		
	Total	159.911	44			

- a. Dependent Variable: Perceived benefits  
 b. Predictors: (Constant), If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.332	.807		16.519	.000
	If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom	1.104	.190	.663	5.802	.000

- a. Dependent Variable: Perceived benefits

Hence,

Perceived benefits = (If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom)(1.104) + 13.332 ( $p < .05$ ,  $R^2 = 0.439$ ).

This survey item was highly predictive of overall perceived benefits sub-scale score.



#### 4.6.4 Perceived barriers regressions.

There were two items in the perceived barriers sub-scale that were meaningful predictors of perceived barriers.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Using a condom seems like an insult to my partner <sup>b</sup>		.Enter

- a. Dependent Variable: Perceived barriers  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693 <sup>a</sup>	.480	.468	2.07263

- a. Predictors: (Constant), Using a condom seems like an insult to my partner

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	170.525	1	170.525	39.696	.000 <sup>b</sup>
	Residual	184.720	43	4.296		
	Total	355.244	44			

- a. Dependent Variable: Perceived barriers  
 b. Predictors: (Constant), Using a condom seems like an insult to my partner

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.263	.571		12.718	.000
	Using a condom seems like an insult to my partner	1.602	.254	.693	6.300	.000

- a. Dependent Variable: Perceived barriers

Hence,

Perceived barriers = (Using a condom seems like an insult to my partner)(1.602) + 7.263 ( $p < .05$ ,  $R^2 = 0.480$ ).

This survey item was moderately predictive of overall perceived barriers sub-scale score.

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I do not enjoy (or think I might not enjoy) sex when using a condom <sup>b</sup>		.Enter

- a. Dependent Variable: Perceived barriers  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729 <sup>a</sup>	.531	.520	1.96875

- a. Predictors: (Constant), I do not enjoy (or think I might not enjoy) sex when using a condom

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	188.577	1	188.577	48.653	.000 <sup>b</sup>
	Residual	166.667	43	3.876		
	Total	355.244	44			

- a. Dependent Variable: Perceived barriers  
 b. Predictors: (Constant), I do not enjoy (or think I might not enjoy) sex when using a condom

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.758	.585		11.549	.000
	I do not enjoy (or think I might not enjoy) sex when using a condom	1.543	.221	.729	6.975	.000

- a. Dependent Variable: Perceived barriers

Hence,

Perceived barriers = (I do not enjoy sex when using a condom)(1.543) + 6.758 ( $p < .05$ ,  $R^2 = 0.531$ ).

This survey item was moderately predictive of overall perceived barriers sub-scale score.

#### 4.7 Self-Efficacy Regressions: Summary

The regressions for self-efficacy are summarized below:

Table 4.6

##### *Presentation of Regressions for Self-Efficacy*

Self-Efficacy Item	B	R <sup>2</sup>	p
Confident to put on a condom	7.162	0.477	<0.05
Confident to purchase condoms	6.425	0.590	<0.05
Confident to carry a condom	7.196	0.520	<0.05
Confident to discuss condom usage	8.101	0.589	<0.05
Confident to suggest using condoms	7.143	0.537	<0.05
Confident to maintain an erection while using a condom	4.493	0.376	<0.05
I am not embarrassed to put a condom on	8.891	0.623	<0.05
I am not afraid of rejection when suggesting condom use	5.579	0.437	<0.05
Confident to use a condom correctly	9.611	0.614	<0.05
Confident to use condom without reducing sexual sensations	3.336	0.363	<0.05
Confident to use condom after drinking or using drugs	2.644	0.272	<0.05
Confident to put condom in the heat of passion	5.191	0.591	<0.05

The qualitative analysis disclosed that self-disclosed barriers to condom use clustered more frequently around availability and partner objections. Availability, both on its own and in conjunction with other cues, was the most important barrier to condom use in the sample. STI prevention was the most frequently cited benefit.

#### **4.8 Conclusion**

A number of notable findings emerged from the analysis. Some of these findings were expected and others unexpected. The findings will be discussed in relation to theory and literature in the final chapter of the study. The findings will also be used as a basis from which to issue recommendations to policy-makers and to future scholars working on the topic of condom use and attitudes.

## Chapter 5: Conclusion

### 5.1 Introduction

The concluding chapter of the study (a) summarizes and discusses the findings in relation to past theories and studies related to safe sexual behavior, with particular attention to findings that seem to contradict or otherwise clash with existing knowledge; (b) uses the findings to issue recommendations to policy-makers in the Philippines; (c) uses the findings to issue recommendations for future scholarship on the topic of sexual behavior related to MSM; and (d) acknowledges the limitations of the study.

### 5.2 Summary of Findings

- Participants had high self-efficacy scores
- Participants had high perceived benefits scores
- Participants had moderate perceived barriers scores
- Participants had moderate severity scores
- Participants had moderate susceptibility scores
- Only 15.6% wore condoms in every MSM encounter over the three months prior to data collection
- Individuals with higher self-efficacy perceived that the barriers to condom use were lower, such that  $\text{Self-efficacy} = (\text{Perceived barriers})(-1.166) + 64.709$  ( $R^2 = 0.297$ )
- Individuals with higher self-efficacy perceived that the benefits of condom use were lower, such that  $\text{Self-efficacy} = (\text{Perceived benefits})(1.376) + 28.164$  ( $R^2 = 0.186$ )
- Individuals who perceived higher benefits of condom use also reported that AIDS / HIV was of lower severity, such that  $\text{Severity} = (\text{Perceived benefits})(-1.020) + 28.471$  ( $R^2 = 0.191$ )
- Individuals who perceived higher benefits of condom use also believed themselves to be less susceptible to AIDS / HIV, such that  $\text{Susceptibility} = (\text{Perceived benefits})(-1.212) + 34.367$  ( $R^2 = 0.233$ )
- People who believed more in the severity of AIDS / HIV also believed themselves to be more susceptible, such that  $\text{Susceptibility} = (\text{Severity})(0.675) + 5.803$  ( $R^2 = 0.394$ )

- Sub-scale scores within each of the five condom frequency groups (never, infrequently, sometimes, frequently, and every time) were statistically indistinguishable
- The perceived benefits sub-scale did not perform well in terms of item-to-subscale regression

### 5.3 Relation of Findings to Past Scholarship

The findings were closely related to insights derived from the data gathered by the HIV and AIDS Data Hub for Asia Pacific (2015). The HIV and AIDS Data Hub for Asia Pacific data indicated a moderate to high level of HIV susceptibility for Filipino men, based on the relatively high percentage of MSM encounters that were unprotected. In the current study, it was observed that only 15.6% of the Filipino men who were surveyed employed condoms in every MSM encounter in the 3 months immediately preceding the data collection period.

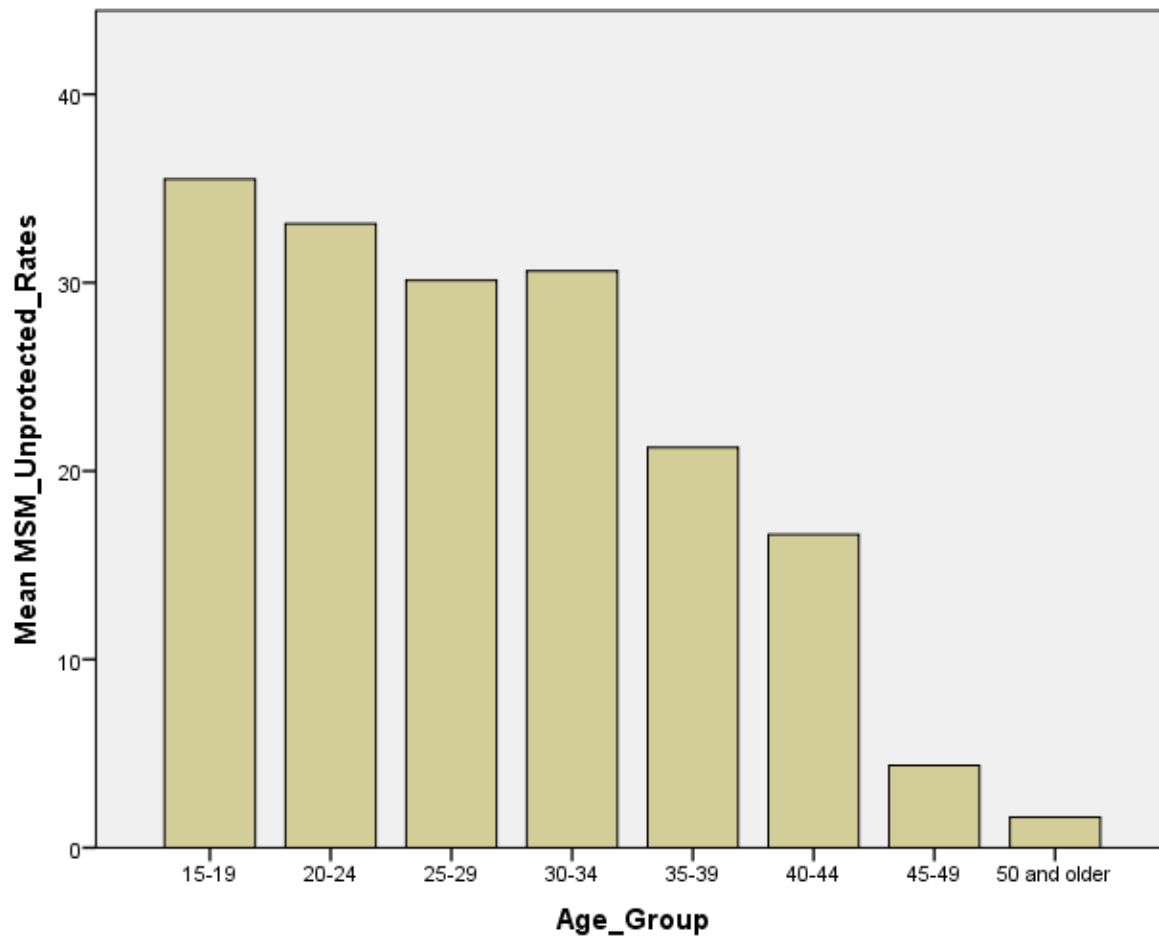


Figure 5.1: Incidence of Unprotected Sex Among MSM by Age Group

The graph above represents the HIV and AIDS Data Hub for Asia Pacific data, which indicate that, in the younger groups, unprotected MSM sex rates are routinely over 30%, measuring over the past 12 months. While the current study only measured unprotected activity over the past three months, the rate of 15.6% indicates the likelihood that, if the horizon were extended to 12 months, the rates would be comparable to those observed for the HIV and AIDS Data Hub for Asia Pacific data.

What the HIV and AIDS Data Hub for Asia Pacific (2015) study contributed that was of most value was insight into the age dynamics of risky MSM behavior in the Philippines. However, the HIV and AIDS Data Hub for Asia Pacific data did not offer any insight into why Filipino MSM did not use condoms. One of the contributions of the current study was to offer insight into these reasons. While the original purpose of the study was to obtain deep qualitative insight into reasons for condom disuse, the responses given by participants were not rich enough to generate this kind of insight. Nonetheless, the responses still extended what little is known of Filipino men's disuse of condoms in the MSM context, and, understood in conjunction with the HIV and AIDS Data Hub for Asia Pacific data, can offer policy-makers a more viable way forward, as discussed under the heading of recommendations below.

The main contribution of the study in this regard was in the open-ended question boxes that gathered data on the benefits of, as well as barriers to, condom use as perceived by Filipino MSM. These data indicate that Filipino men are mainly deterred by condom availability and mainly encouraged by STI prevention. These findings indicate that Filipino MSM have an essentially rational approach to condom use. If condoms were more available, participants would use condoms more frequently. Participants also have a healthy appreciation of condoms' ability to reduce STIs. Interestingly, reduced sensation, a frequent hedonic complaint ascribed to condom users, was not a major barrier. STI prevention, which was coded under related headings (such as a safer sex) was the predominant benefit, a finding that can provide important feedback for the redesign of the perceived benefits sub-scale recommended later in the chapter.

Table 5.1

*Barriers to Condom Use*

	Frequency	Percent	Valid Percent	Cumulative Percent
Application / Heat of Passion	1	2.2	2.2	2.2
Application / Size	1	2.2	2.2	4.4
Availability	8	17.8	17.8	22.2
Availability / Heat of Passion	4	8.9	8.9	31.1
Availability / Partner	1	2.2	2.2	33.3
Depends on Situation	1	2.2	2.2	35.6
Heat of Passion	1	2.2	2.2	37.8
Heat of Passion / Application / Reduced Sensation	2	4.4	4.4	42.2
Valid N/A	1	2.2	2.2	44.4
Nothing	6	13.3	13.3	57.8
Partner	8	17.8	17.8	75.6
Partner / Reduced Sensation	1	2.2	2.2	77.8
Reduced Sensation	3	6.7	6.7	84.4
Reduced Sensation / Trust	1	2.2	2.2	86.7
Rejection	1	2.2	2.2	88.9
Trust	4	8.9	8.9	97.8
Trust / Availability / Application / Size	1	2.2	2.2	100.0
Total	45	100.0	100.0	



Table 5.2

*Benefits of Condom Use*

	Frequency	Percent	Valid Percent	Cumulative Percent
Better Life	1	2.2	2.2	2.2
Guilt	2	4.4	4.4	6.7
Hygiene	1	2.2	2.2	8.9
Prevent STI	25	55.6	55.6	64.4
Prevent STI / Pregnancy	1	2.2	2.2	66.7
Prevent STI / Hygiene	2	4.4	4.4	71.1
Prevent STI / Pregnancy	1	2.2	2.2	73.3
Valid Prevent STI/Safe/Better Sex Protection / Awareness	1	2.2	2.2	75.6
Protection / Awareness	4	8.9	8.9	84.4
Protection / Awareness / Prevent STI	1	2.2	2.2	86.7
Safety	2	4.4	4.4	91.1
Safety / Better Life	1	2.2	2.2	93.3
Secure	3	6.7	6.7	100.0
Total	45	100.0	100.0	

**5.4 Recommendations for Policy-Makers**

Policy-makers in the Philippines face a challenging situation. While there has been a recent increase in the number of AIDS cases, the country has also been

fortunate in terms of its exposure to the anti-retroviral drugs that are preventing many of those Filipinos who have HIV from acquiring AIDS. Proof of the efficacy of these drugs was presented in the regression analyses conducted on the HIV and AIDS Data Hub for Asia Pacific (2015) data as part of Chapter 2 of the study. With HIV no longer constituting the death sentence it once did, policy-makers would not be well-served to use scare tactics on Filipino MSM. While early HIV and AIDS policies focused on emphasizing the extreme deadliness of the disease, the fact is that HIV has been extremely survivable. Coupled with the fact that HIV incidence is relatively low in the Philippines, there is no longer an empirical basis for the kind of broad-based, heavy-ended public health approaches that were utilized by many countries in the 1980s and 1990s.

However, based on the HIV and AIDS Data Hub for Asia Pacific (2015) data as well as on the findings from the current study, it appears to be the case that a portion of the Filipino population—men who engage in condomless MSM activity—remains susceptible to both HIV and AIDS. Policy efforts need to focus on this segment of the population. Global data leave little doubt that, while HIV and AIDS can be acquired by anyone, the people who are most vulnerable to HIV are in fact MSM, and, in particular, men who engage in sex with men without condoms. If the HIV and AIDS Data Hub for Asia Pacific data are accurate, then the Filipino men who are in most danger are the youngest men. Policy-makers therefore need to target their HIV and AIDS education efforts towards schools and other venues in which young men are more likely to congregate.

Earlier in the chapter, it was mentioned that the reason most frequently given for Filipino men's disuse of condoms was the issue of availability, whether on its own or in conjunction with other concerns, such as the heat of passion or partner objection. If it is assumed that the HIV and AIDS Data Hub for Asia Pacific (2015) data are accurate, then the core of the problem of young Filipino men's disuse of condoms might have to do with this population's limited access to condoms rather than hedonism, carelessness, or other traits. If so, then the best step policy-makers can take is to increase younger men's access to condoms. Another observation in the HIV and AIDS Data Hub for Asia Pacific dataset was that well over 80% of Filipino men purchase condoms from

pharmacies. Younger people might be less likely to get to pharmacies, or there might be other barriers that prevent them from making condom purchases. Making condoms available in public locations frequented by young men would be one solution, although it will no doubt come with political costs for policy-makers who are operating in what is still a relatively conservative country.

### **5.5 Recommendations for Future Studies**

A number of recommendations for future study can be made. The first recommendation for future study is to learn more about the interaction between age and risky MSM behavior. In a previous study, that conducted by the HIV and AIDS Data Hub for Asia Pacific (2015), it was found that younger Filipino men engaged in substantially riskier MSM behaviors, notably engaging in unprotected sex. Future scholars would do well to explore the possible impact of age on condom usage among MSM in the Philippines. If the age effect is as stark as the HIV and AIDS Data Hub for Asia Pacific data indicate, then policy efforts have to be concentrated among this population.

Future studies should also focus more closely on the concept of perceived benefits of condom use. Consider the following regression from the study: Consider the regressions of the individual items on the perceived benefits sub-scale. In terms of face validity, it seems highly plausible that there could be no greater benefit to using a condom that protecting against a grievous disease such as AIDS.

In fact, survey participants were in a significant degree of agreement (4.76 out of 5 possible points) with the claim that condom use was protective against AIDS. It is therefore quite perplexing why the  $R^2$  of this item was so low when it was regressed on the perceived benefits sub-scale. Closer analysis reveals that the other sub-scale items behave oddly, which seems to necessitate more research on the perceived benefits of condom use among this population of men. The following outputs were computer-generated by SPSS to assist in illustrating the method used for obtaining the final adjusted  $R^2$ .

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I believe that the chances of contracting AIDS can be significantly reduced by using a condom <sup>b</sup>		.Enter

- a. Dependent Variable: Perceived benefits  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.392 <sup>a</sup>	.154	.134	1.77414

- a. Predictors: (Constant), I believe that the chances of contracting AIDS can be significantly reduced by using a condom

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.566	1	24.566	7.805	.008 <sup>b</sup>
	Residual	135.345	43	3.148		
	Total	159.911	44			

- a. Dependent Variable: Perceived benefits  
 b. Predictors: (Constant), I believe that the chances of contracting AIDS can be significantly reduced by using a condom

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.668	2.938		3.290	.002
	I believe that the chances of contracting AIDS can be significantly reduced by using a condom	1.719	.615	.392	2.794	.008

- a. Dependent Variable: Perceived benefits

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	I think it is worth the effort to have condoms readily available <sup>b</sup>		Enter

- a. Dependent Variable: Perceived benefits  
 b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.557 <sup>a</sup>	.310	.294	1.60203

- a. Predictors: (Constant), I think it is worth the effort to have condoms readily available

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.551	1	49.551	19.307	.000 <sup>b</sup>
	Residual	110.360	43	2.567		
	Total	159.911	44			

- a. Dependent Variable: Perceived benefits  
 b. Predictors: (Constant), I think it is worth the effort to have condoms readily available

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.706	2.320		3.322	.002
	I think it is worth the effort to have condoms readily available	2.142	.487	.557	4.394	.000

- a. Dependent Variable: Perceived benefits

The question about effort did not significantly predict score on the benefits scale. However, participants were in significant agree (4.73 out of 5) with the claim that it was worth the effort to have condoms readily available. Future scholars would do well to construct other items that are more likely to measure perceived benefits. Doing so would increase the Cronbach's  $\alpha$  of the perceived benefits sub-scale. Given what the current study discovered about the predominance of STI prevention as a benefit, perhaps more benefit-related questions need to invoke this aspect of sexual behavior.

## 5.6 Limitations of the Study

The study had a number of limitations. First, because of the absence of demographic and other descriptive information about the subjects, numerous factors that might have predicted or explained patterns in the data were neglected. It is possible, for example, that religious attitudes might have influenced some of the participants' beliefs and attitudes about sexual behavior, but, because the survey did not solicit information about religious adherence, the potential impact of this aspect of individual personality was not measured. The same can be said for many other variables, including educational level and income level. Perhaps the most important missing variable, in light of the HIV and AIDS Data Hub for Asia Pacific (2015) data, was age. Although participants were asked to indicate their age on the questionnaire, many neglected to respond to that question. The HIV and AIDS Data Hub for Asia Pacific data contain substantial evidence that younger Filipino men engage in the highest rates of unprotected MSM activity. That finding could not be triangulated or contested in the current study because of the absence of age as a demographic variable.

In addition to the general absence of demographic questions that could have added explanatory power to the study, numerous general measures of sexual behavior were also missing. Promiscuity, for example, is likely to be explanatorily important in explaining aspects of sexual behavior, at least judging by the literature (see for example Baral et al., 2009; Chan & Ghose, 2015). However, promiscuity was not measured in this study.

Another limitation of the study was the relatively low inter-item correlation. The Cronbach's  $\alpha$  of the study was 0.607. Scales often have Cronbach's  $\alpha$  scores that are over 0.700 or even 0.800. In practical terms, what the relatively Cronbach's  $\alpha$  score means is that the scale might not measure a single concept. Admittedly, the scale contains five sub-scales, but it is intended to be an integrated measure of sexual behavior.

When the self-efficacy sub-scale's Cronbach's  $\alpha$  was measured, it was 0.772, a substantial increase over the Cronbach's  $\alpha$  for the study as a whole. The Cronbach's  $\alpha$  values for susceptibility and severity were similarly high, but the Cronbach's  $\alpha$  scores for

perceived benefits and perceived barriers were low. Closer analysis confirmed the initial judgment that the perceived benefits scale was of low quality. This sub-scale might require substantial redesign, as discussed in the recommendations for future research.

The study was also limited by the utilization of the qualitative method on conjunction with the quantitative method. In this study, the application of the quantitative method was limited mainly by its failure to include additional variables, as discussed above. The application of the qualitative method was limited by the provision of text boxes for participants to include their comments about condom usage related to MSM activity. The responses given were very brief explanations of reasons for condom usage or non-usage. These explanations did not yield the kind of rich data necessary for qualitative research. In fact, because the responses were no brief and evocative of each other, they were coded into data tables and presented alongside the quantitative research.

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**Appendix A. HIV/AIDS Belief Questionnaire (Adapted from Peltzer, 2000)**

**Gender:** [ ] Male [ ] Female [ ] Other: \_\_\_\_\_

**Race:** [ ] Filipino [ ] Other: \_\_\_\_\_

**Age:** \_\_\_\_\_

1. **Condom use when having sexual intercourse in the past three months:**  
1 – never 2- infrequently 3-sometimes, 4-frequently, 5-every time
  
2. **If I decided to have sexual intercourse with a partner I would use a condom prevent infection:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
3. **I feel that the chances are good that I can get AIDS:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
4. **I am afraid that I might contract AIDS:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
5. **I believe that I can be exposed to HIV infection if my sex partner is heterosexual:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
6. **I believe that I can get AIDS even if I am only having sex with one partner:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
7. **AIDS causes death:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
  
8. **I would rather have any other terminal illness than AIDS:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

9. **I would rather die from a violent death (e.g. gunshot, car accident, etc.) than from AIDS:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
10. **AIDS is probably the worst disease a person can get:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
11. **I believe that the chances of contracting AIDS can be significantly reduced by using a condom:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
12. **I think it is worth the effort to have condoms readily available:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
13. **I feel that the chances of contracting AIDS can be reduced by having sex with only one partner:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
14. **If a condom is not available, it would be worth the effort to discontinue sexual activity to obtain a condom:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
15. **Using a condom seems like an insult to my partner:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
16. **It is embarrassing (to me) to buy condoms:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree
17. **I do not enjoy (or think I might not enjoy) sex when using a condom:**  
1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**18. I would offer first-aid to an AIDS patient because I would feel guilty not offering help:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**19. Confident to put on a condom:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**20. Confident to purchase condoms:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**21. Confident to carry a condom:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**22. Confident to discuss condom usage:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**23. Confident to suggest using condoms:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**24. Confident to maintain an erection while using a condom:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**25. I am not embarrassed to put a condom on:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**26. I am not afraid of rejection when suggesting condom use:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**27. Confident to use a condom correctly:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree



**28. Confident to use condom without reducing sexual sensations:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**29. Confident to use condom after drinking or using drugs:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

**30. Confident to put condom in the heat of passion:**

1- strongly disagree 2 – disagree 3- not sure 4- agree 5- strongly agree

31. What major barriers to condom use do you personally encounter?

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32. What major benefits to using a condom do you identify?

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33. How does using a condom make you feel?

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34. How do(es) your potential partner(s) feel about your choice to use a condom?

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35. Do you consider yourself a top, bottom, versatile, other, or none of these categories? Please explain briefly.

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