

## DISTRIBUTION AGREEMENT

In presenting this thesis or dissertation as a partial fulfillment of the requirements for an advanced degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis or dissertation in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis or dissertation. I retain all ownership rights to the copyright of the thesis or dissertation. I also retain the right to use in future works (such as articles or books) all or part of this thesis or dissertation.

---

Edwin Marmol

---

Date

A Meta-Analysis Examination of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors  
in Latin America

By

Edwin Marmol PA, B.H.S.  
B.S., Charles R. Drew University, 2004  
M.P.H. Emory University, 2011

Master of Public Health  
Prevention Science

---

Carlos Franco-Paredes MD, MPH, DTMH, FACP  
Committee Chair

---

Liz Vargas, WHNP, MSN  
Committee Member

---

Melissa Alperin, MPH, CHES  
Chair, Career MPH Program

A Meta-Analysis Examination of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors  
in Latin America

By

Edwin Marmol PA, B.H.S.  
B.S., Charles R. Drew University, 2004  
M.P.H. Emory University, 2011

Thesis Committee Chair: Carlos Franco-Paredes MD, MPH, DTMH, FACP

An abstract of  
A thesis submitted to the Faculty of the  
Rollins School of Public Health of Emory University  
in partial fulfillment of the requirements for the degree of  
Master of Public Health  
in Prevention Science  
2011

# A Meta-Analysis Examination of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors in Latin America

By  
Edwin Marmol PA, B.H.S.

## **Abstract**

The research sought to contribute to existing knowledge on HIV/AIDS in Latin America by examining knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS. This information will contribute toward enabling the region address challenges related to the epidemic appropriately. The study was conducted using a meta-analysis of two articles written between 2005 and 2010. Findings showed that important to HIV/AIDS picture in Latin America is rising understanding of heterosexual activities as a transmission mode, stigmatization, taboo, poor condom use, masculinity and machismo, and gender roles.

Recommended for future research is the identification of implications in maintaining current culture on the epidemic and investigating ways to alleviate the negative attribution.

Further recommendations are for the public health sector to conduct public education on dangers of upholding traditional gender roles, and engage in public opinions directed at increasing women and feminized homosexual individuals sexual negotiating power.

A Meta-Analysis Examination of HIV/AIDS Knowledge, Attitudes, Beliefs, and Behaviors  
in Latin America

By

Edwin Marmol PA, B.H.S.  
B.S., Charles R. Drew University, 2004  
M.P.H. Emory University, 2011

A report submitted to the  
Career Master of Public Health Program  
The Rollins School of Public Health of Emory University  
in partial fulfillment of the requirements of the degree of  
Master of Public Health  
2011

## ACKNOWLEDGEMENTS

I am grateful to all those who have supported me through this long endeavor. First and foremost I offer my sincerest gratitude to my committee chair, Dr. Carlos Franco Paredes, who has supported me throughout my thesis with his patience and knowledge at the same time allowing me the room to work in my own way. To my field supervisor Liz Vargas one simply could not wish for a better or friendlier supervisor. I want to also thank all my instructors in the CMPH program for their sincere belief in the CMPH program and the dedication to providing me with a quality education. I am so fortunate that this program exists and being part of it. Special thanks to Melissa Krancer for her endless help throughout this process.

Finally, thank you to my family, for your support on all those days when I was consumed with school and the time I was not there for you, you were there for me; Roko, Mel, Mantha, Meg, Dy and Liz.

**“It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change.”**

-Charles Darwin

1809-1882

## Table of Contents

Chapter I: Introduction.....	1
1.1. Introduction and Study Rationale.....	1
1.2. Problem Statement .....	3
1.3. Purpose Statement.....	4
1.4. Research Question.....	4
1.5. Significant Statement .....	5
1.6. Definition of Terms.....	5
Chapter II: Review of the Literature.....	7
2.1. Introduction .....	7
2.2. The Scale of HIV/AIDS in Latin America.....	7
2.3. HIV Transmission in Latin America.....	10
2.4. Knowledge, Attitude, and Beliefs .....	12
2.5. Comparison of HIV Cases in Latin America .....	15
2.6. Summary .....	16
Chapter III: Research Methodology.....	18
3.1. Introduction .....	18
3.2. Research Sample .....	18
3.3. Research Design: Meta-Analysis .....	18
3.4. Procedures .....	19
3.4.1. Database and Search Strategy.....	19
3.4.2. Article Inclusion and Exclusion Criteria.....	20
3.4.3. Data Abstraction .....	21
3.5. Data Synthesis.....	21
3.6. Research Limitations and Delimitations .....	21
3.7. Summary .....	22
Chapter IV: Findings.....	23

4.1.	Introduction .....	23
4.2.	Knowledge related to HIV/AIDS .....	24
4.3.	Attitude toward HIV/AIDS .....	25
4.4.	Beliefs Associated with HIV/AIDS .....	26
4.5.	Behaviors Representing the HIV/AIDS Epidemic.....	27
4.6.	Effect of Knowledge, Attitudes, Beliefs, and Behaviors on Latin America’s HIV/AIDS Scenario.....	29
4.7.	Other Interesting Findings.....	29
4.8.	Summary .....	30
Chapter V: Conclusion, Implications, and Recommendations .....		31
5.1.	Introduction .....	31
5.2.	Summary of Study.....	31
5.3.	Conclusion.....	32
5.4.	Implications for Theory and Practice .....	34
5.5.	Recommendations .....	34
Reference List: .....		36
Appendix.....		40



## **Chapter I: Introduction**

### **1.1. Study Rationale**

Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome (HIV/AIDS) epidemic is an important public health issue globally and in Latin America with critical effects upon the lives of millions. Latin America represents one area in the Americas with very high rates of HIV, with over 2 million people infected by the virus (The Henry J. Kaiser Family Foundation (KFF), 2009). Though this number represents the regional epidemic outlook, the profile is different for each country within Latin America, with countries with large populations having higher rates. For example, Brazil accounts for more than 40 percent of people living with HIV in Latin America. However, countries with smaller populations such as Guatemala are more adversely affected by the epidemic compared to those with larger populations when considering the prevalence rates.

Latin America is a region defined by diversity, but also with common attributes, which has exacerbated the HIV/AIDS epidemic and complicated regional response. In carrying out a meta-analysis on the knowledge, attitudes, beliefs, and behavior related to HIV/AIDS in Latin America, this study increases critical knowledge that would be useful in understanding the tenets of HIV/AIDS in Latin America and thus creating appropriate intervention.

Public health research is important in contributing to knowledge and addressing health related issues within the broader community. This research takes this task to contribute to HIV/AIDS knowledge in Latin America toward providing definite and grouped information that would be useful to public health officials, and policy makers in making a positive change in Latin America.

Currently, Latin America has been able to make some positive changes in addressing the HIV/AIDS epidemic such as in Brazil and Mexico that have put in place various prevention and treatment initiatives, however, the response remains with major gaps (KFF, 2009). The current research would contribute to consolidating available information to assist in advancing the positive changes taking place and drive those countries that are yet to make changes.

Making it important to understand the knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS in Latin America are the changing behavioral trend from traditional transmission to newer trends that need to be addressed by the public health sector. Secondly, published on Latin America HIV/AIDS epidemic on knowledge, attitudes, beliefs, and behaviors on HIV/AIDS for most countries is limited (Health Studies Branch, 1995), which constrains the possibility of public health response. This increases the need for an in-depth analysis on the HIV/AIDS epidemic in Latin America with consideration for both the small and large countries.

Providing the knowledge would be beneficial toward combating the social and economic cost of HIV/AIDS in the Latin American countries. In Latin America, the epidemic infects mostly people between 15 and 49 years; therefore, most of the infected are people in their prime and most productive years (Garcia-Abreu, Noguera, and Cowgill, 2003). To combat the costs, there is need for information that the public health sector can utilize to make a difference in the region. Therefore, the current research involves conducting a meta-analysis examination of HIV/AIDS knowledge, attitudes, beliefs, and behaviors in Latin America.

## 1.2. Problem Statement

On average, Latin America only has a 0.6% of the population infected with HIV, which is considerably low compared to other region such as the Sub-Saharan Africa that has a 5.2% of its adult population living with HIV/AIDS as of 2008 (KFF, 2009). Others with higher rates are the Caribbean at 1% and Central Asia at 0.7%, meaning Latin America comes in third globally. Although the region shows considerably low rates in its entirety, country scales are more worrying raising concerns related to the impact of the epidemic especially in the smaller countries that have a more severe scale. Countries such as Belize, Guyana, and Suriname have a 2.1%, 2.5%, and 2.4% respectively in HIV prevalence, compared to the less than one percent for the majority of the countries in the region (Avert, 2010a). This means that the countries with smaller populations are more intensely affected by the epidemic.

Within this profile, the good news is that the epidemic seems to have stabilized across the region within the past one decade (KFF, 2009). However, the positive picture does not completely represent the full picture of what is happening in Latin America in relation to HIV/AIDS. Although the epidemic levels are considerably stable, the knowledge, attitudes, beliefs, and behaviors associated with HIV/AIDS are somewhat reflecting a negative change. For example, Garcia-Abreu et al., (2003, p.xiii) states that the "disease appears to be evolving, from affecting virtually only the highest risk groups such as men who have sex with men (MSM) and injecting drug users (IDUs), to becoming an increasingly generalized problem." The behaviors associated with HIV/AIDS spread are changing to include young age first intercourse, violence related spread. Furthermore, the response rate for HIV/AIDS threat is not specific raising concerns on the ability of countries to address the epidemic.

Taking into consideration the negative side of the Latin America HIV/AIDS scenario, it is important to understand the knowledge, attitudes, beliefs, and behaviors associated with the epidemic as a foundation for gaining positive change. Despite the stabilizing of the threat in the last decade, changes seen in the spread of HIV/AIDS raises caution as to the possibility of the epidemic becoming of a higher threat in the future. Understanding the different attributes related to HIV/AIDS in Latin America, increases the possibility of defining appropriate response measures and avoiding the sad stories that come with HIV/AIDS in many parts of the world. This represents a way to achieve positive outcomes for the large countries as well as small countries considering that Latin America is a highly diverse region, with each community having specific knowledge, attitudes, beliefs and behaviors, although some cut across the region.

### **1.3. Purpose Statement**

The study will involve conducting an examination on the knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS in Latin America toward providing information to enable the region address challenges related to the epidemic appropriately.

### **1.4. Research Question**

The research will be responding to the question – *what is the knowledge, attitudes, beliefs, and behaviors associated with HIV/AIDS in Latin America?*

To enable an in-depth analysis, the main research question will be supported by the subsequent sub-questions –

**Question 1** – Do people in Latin America have pertinent knowledge relating to HIV/AIDS?

**Question 2** - What is the public attitude toward HIV/AIDS in Latin America?

**Question 3** – What are the main beliefs associated with HIV/AIDS in Latin America?

**Question 4** – What behaviors represent the HIV/AIDS epidemic in Latin America?

**Question 5** – How does the available knowledge, represented attitudes, beliefs, and behaviors affect the entire HIV/AIDS picture in Latin America?

## **1.5. Significant Statement**

Latin America though adversely affected by HIV/AIDS is still grappling with putting in place sufficient responses in the public arena. Therefore, need for information pertinent to understanding factors that define the epidemic is critical, if the region is to diminish the negative attribution. The current study moves toward providing required information by consolidating studies relating to knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS through a meta-analysis study, as a backbone for public health practice and policy making in addressing HIV/AIDS issues in Latin America.

## **1.6. Definition of Terms**

**HIV** – the initials HIV stands for human immunodeficiency virus. The virus belongs to the group retroviruses, and when it enters the body it kills or damages the immune system cells (Stolley, & Glass, 2009). Normally, when cells are destroyed by a virus, the body tries to make new cells thus containing the virus, but in the case of HIV, the virus eventually wins out and progressively destroys the ability of the immune system to fight infections and certain cancers. Therefore, the infected person becomes vulnerable to opportunistic infections and certain cancers.

**AIDS** – this refers to the acquired immunodeficiency syndrome caused by HIV, which takes place after the virus destroys much of the body's immunity (Stolley, & Glass, 2009). The body

looses its defenses and the immune cell count falls to a critical level or a person develops life threatening infections and cancers.

**Knowledge** – for the purpose of this study, knowledge denotes the public awareness of information surrounding HIV/AIDS (Higgins, & Norton). This information represents what is presented through the public health system or other forms such as media and lay sources.

**Attitude** – this denotes a "general and enduring positive or negative feeling about some person, object, or issue" (Maio, & Haddock, 2009). Attitude comes from psychological tendency to make a judgment or evaluation about something. In the current research, attitude is deemed to refer to people's judgment concerning the virus, the disease, and the people living with HIV.

**Belief** – the term refers to a principle that enables people to define the way they live their lives (Gutstein, & Sheely, 2002). Beliefs include those that are paramount to our lives and those that if changed will not change much in our lives. In this research, beliefs represent those aspects of our existence that determine our response to HIV/AIDS.

**Behavior** – in the current research, behavior refers to action taken by people that leads to HIV infections such as engaging in various modes of transmission including unprotected sexual encounter with an infected person (Hornik, 2002).

## **Chapter II: Review of the Literature**

### **2.1. Introduction**

This chapter offers an in-depth analysis of previous literature responding to the issue of HIV/AIDS in Latin America. The chapter includes information from research studies in published journals, and organizational generated information as well as information from the internet as support for the published literature. The literature review provides the wide outlook of HIV/AIDS in Latin America thus laying a foundation for the current study; moreover, it identifies information gaps that will be relevant in the study. Additionally, the review also offers insight into possible research methods useful in conducting studies related to HIV/AIDS in Latin America.

### **2.2. The Scale of HIV/AIDS in Latin America**

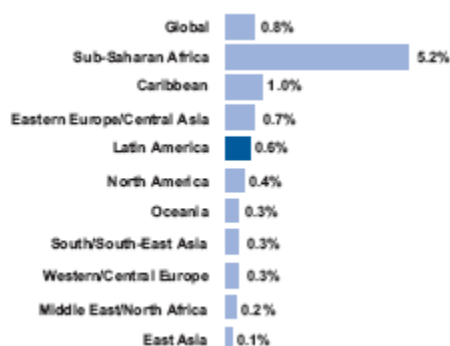
The world today calculates an average of 33.3 million people as living with HIV/AIDS as at the end of 2009, a 27% increase from an average of 27.8 million a decade earlier in 1999 (United Nations Programme on HIV/AIDS (UNAIDS), 2010). Among these 2.6 million are new infections in children and adults, which is a decline from the 3.1 million registered in 2001. Despite the decline in new cases, AIDS related deaths among children and adults remains relatively the same with an average of 1.8 million.

Data provided for Central and South America on which Latin America falls shows considerable increases between 2001 and 2009 with an average of 1.1 to 1.4 million people respectively (UNAIDS, 2010). Among these, 92,000 have been new infections, which is a decline from the 99,000 average registered in 2001 showing a positive movement. However,

HIV/AIDS related deaths have increased from an average of 53,000 in 2001 to 58,000 in 2009, while the average for infections for people between 15 and 49 years remains at 0.5%.

When considering data specific to Latin America, approximately 2.0 million people are living with HIV/AIDS as of 2008 (The Body, 2010). Newly infected cases of HIV in children and adults averaged at 170,000 people, while AIDS related death for children and adults averaged at 77,000 in the same year. This represents a 0.6 percent of the world statistics as shown in the subsequent graph representing world rates as of 2008. The increase 2009 records showed average increases from the previous year, which had registered 1.7 million cases of people living with HIV-AIDS (HIV InSite, 2010). The deaths related to HIV/AIDS in the same year amounted to 63,000 people.

#### **Percentage of Adults Living with HIV/AIDS in 2008 (adopted from KFF, 2009)**



The following table breaks down the estimates for HIV/AIDS in Latin America by country as at the end of 2007 (adapted from Avert, 2010b):

#### **Estimated HIV/AIDS Prevalence and Deaths by End 2007**

Country	Living with HIV/AIDS		Deaths due to AIDS during 2007
	All People	Adult (15-49) rate %	
Argentina	120,000	0.5	5,400
Belize	3,600	2.1	<200



Bolivia	8,100	0.2	<500
Brazil	730,000	0.6	15,000
Chile	31,000	0.3	<1,000
Colombia	170,000	0.6	9,800
Costa Rica	9,700	0.4	<200
Ecuador	26,000	0.3	1,200
El Salvador	35,000	0.8	1,700
Guatemala	59,000	0.8	3,900
Guyana	13,000	2.5	<1,000
Honduras	28,000	0.7	1,800
Mexico	200,000	0.3	11,000
Nicaragua	7,700	0.2	<500
Panama	20,000	1.0	<1,000
Paraguay	21,000	0.6	<1,000
Peru	76,000	0.5	3,300
Suriname	6,800	2.4	-
Uruguay	10,000	0.6	<500
Venezuela	-	-	-
<b>Total</b>	<b>1,700,000</b>	<b>0.5</b>	<b>63,000</b>

As visible in the data presentation in the table, the scale of the epidemic differs among countries, with some being highly affected compared to others. For example, Belize, Guyana, and Suriname have the highest in terms of the rate of HIV among adults in their country, while

Bolivia and Nicaragua have the lowest at 0.2% (Avert, 2010b). Notably, the incidence for HIV/AIDS is not uniform across the region.

### **2.3. HIV Transmission in Latin America**

The transmission routes for HIV in Latin America speak of the risk-behaviors that people in this region engage in leading to their infection as well as the knowledge, attitudes, and beliefs surrounding the disease. Research has been conducted in this area; however, most focus has been on the global level with limited empirical studies targeting Latin America. Agreeably, information is available especially on organizational related basis; nevertheless, studies on knowledge, attitudes and beliefs with actual populations are not as many. When conducting a database search on ProQuest Central it was noted that those studies directly related to Latin America were country specific. This was also true for studies concentrating on attitudes, beliefs, and knowledge. However, relevant studies were identified and with the support of organizational data provides an adequate information.

An important source discussing the Latin American HIV epidemic is Smallman (2007) that describes HIV in Caribbean Cuba and Haiti, Brazil, Mexico and Central America, and Spanish South America. This work describes the mosaic of Latin America HIV infections, where the region shows a series of subepidemics compared to one epidemic. The author explains that in his research as he interviewed people, and observed behavior, he was able to determine that HIV infections in Latin America are driven by various factors that differ in nations.

Smallman (2007) identifies an important factor in the spread of HIV in Latin America that influencing the spread of HIV are the most personal behaviors; however, impersonal forces take a central role. These forces include aspects such as poverty described through slum living, the international drug trade, and migration. These three factors also emerge in other research

clarifying this stipulation such as by considering immigrants and drug users as high risk groups (Garcia-Abreu et al., 2003; Avert, 2010a; Avert, 2010b).

Identified in this research as a primary source of infection is drug use, where drug injecting drugs contributed to many infections in the Southern Cone of Latin America (Smallman, 2007). Agreeing with this analysis is Avert (2010a) and Garcia-Abreu et al. (2003) stipulating that injecting drug users is a highly affected group especially in the Southern Cone countries that have become democrats in the last few years thus leading to liberalization and subsequently to experimentation and excess. Countries that are highly affected by drug use include Argentina, Brazil, Uruguay, and Paraguay as users share needles in injecting cocaine and heroin.

Another important behavior identified in research that has been significant in contributing to spread of HIV is commercial sex. In a randomized controlled trial in Nicaragua, Eggar, Pauw, Lopatzidis, Medrano, Paccaud, and Smith (2000), the researchers promote that commercial sex is an important concern in the spread of HIV. This agrees with reflections posted by Garcia-Abreu et al. (2003), the findings of Smallman (2007).

Another important transmission route identified in Latin America is men who have sex with other men (MSM). Available literature about the region indicate that HIV prevalence among MSM vary between 8 and 26% (Avert, 2010b; Garcia-Abreu, 2003). This affects other countries more than others. For example, in Guatemala HIV prevalence is highest among risk groups with MSM topping the list with 11.5% (Bortman, Saenz, Pimenta, Isern et al., 2006); this case also reflects in Panama where again MSM have a very high prevalence rate at 10.6% (Licda, & Martinez, 2005).

Garcia-Abreu et al (2003) identifies heterosexuality as an emerging area of concern for Latin America HIV infection, such as in Brazil and Honduras. In Brazil, HIV is present across the population with the number of people living with HIV/AIDS (PLWHA) increasing gradually. Within the Andean region, heterosexual transmissions come to about 40% similar to MSM. Compounding the problem of heterosexual transmission is that MSM are also having sex with women, such as in Lima where 9 out of 10 MSM also engage in heterosexual behavior (Avert, 2010b).

#### **2.4. Knowledge, Attitudes, and Beliefs**

To further understand the HIV syndrome in Latin America, it is important to describe its related knowledge, attitudes, and beliefs since the beginning of the epidemic. According to Smallman (2007) knowledge on the origins of HIV remains obscure and limited; however, the disease came to the public attention in 1981 when the Centers for Disease Control (CDC) published ‘Pneumocystis Pneumonia –Los Angeles’ in the *Morbidity and Mortality Weekly Report*. The article described the condition of five homosexuals that had fallen ill with similar symptoms, which was later also reported a few months after the initial 5<sup>th</sup> July publication in New York. From these initial descriptions, HIV became the disease of gay, promiscuous men, and drug users. Further, the disease was considered a United States condition without the likelihood of diversifying to other regions.

The lack of knowledge on the emergence of HIV continues to be visible as people accounts it to strange ideas such as ‘kinky stuff with monkeys’ or ‘voodoo rites’ (Smallman, 2007). Furthermore, even when the retrovirus causing the disease was isolated in 1985, this did not clarify what caused the disease. Instead, it gave rise to concerns related to similar retrovirus as being the origin such as Simian Immunodeficiency Virus found in Chimpanzees, sooty

mangabeys, and other primates. The major knowledge gap has been in determining when HIV crossed to people and how this happened. Notably, the origin of HIV is shrouded in incomplete and unqualified theories.

Defining HIV/AIDS knowledge in Latin America are various misconceptions, myths, and beliefs that contribute highly to the continued infections. One important aspect is stereotypical perceptions shrouding sexual behavior, where men are the dominant gender (Zometa, Dedrick, Knox, Westhoff et al., 2007). Agreeing with this is Smallman (2007) stipulating that Latin America operates on a power relationship as evident in Mexico where the woman is subordinate to the man in her needs. The male needs surpass those of the female, which continues from various social aspects to sexual relations. For example, Latin Americans expect women to marry being virgins and their prime role being that of procreations, which reduces the expectation that women should enjoy sexual relations. Therefore, a woman that enjoys sexual practices may jeopardize her identity as a good wife and mother. Underlying the subordination of women is *marianismo*, a Mexican term that incorporates the power beliefs underscoring women in Latin America (Smallman, 2007).

Gender dominance extends to extramarital affairs where men having affairs are tolerated so long as they are discreet, while women should never engage in extramarital affairs (Smallman, 2007). Increasing the possibility of men having affairs is their being afraid to ask their wives to engage in sexual activities that may be deemed dirty or uncommon. They will seek these elsewhere, which desperately increase the possibility for heterosexual transmission.

Additionally, the subordinate position of women decrease their position as sexual negotiators as presented by Smallman (2007) arguing that women tend to have difficulties in negotiating for condom use. This occurs within and outside marriage, where the male partner has

more power compared to the female partner. Agreeing with this observation is Barker and Das (2004) in their consideration of men as instrumental to mental health.

Another arising concept in the attitude directed at HIV/AIDS in Latin America is machismo, which puts the male partner at the core of a relationship, and that promotes male aggression and risk taking. In other words, machismo is the opposite of marianismo. According to Smallman (2007), machismo is evident in husbands taking the dominant role in marriage, the social tolerance of men engaging in sex outside marriage as long as they remain financially able to support their family. Further, the men are expected to embrace masculinity in all forms, with effeminate behavior highly discouraged, and homosexuality considered demeaning to a real man, a factor that I think may explain the reason for the high number of MSM that also engage in heterosexual behavior. Men also tend to be reluctant in using condoms especially with stable sexual partners.

Confirming the explanation offered by Smallman (2007) is Schutt-Aine and Maddaleno (2002) reporting on a study on Pan American Health Organization research and experience in Latin America. The researchers indicate that male socialization and machismo is at the heart of the HIV/AIDS epidemic in Latin America because they underscore the framework of being a Latin American man. Therefore, the society considers masculinity as instinctive, uncontrollable, and sometimes aggressive. In retrospect, boys/men are the sexual decision makers, deciding in when and where and whether to use condoms. Furthermore, according to the research being a man means being sexually active, being dominant over women, failing to use a condom, not showing emotions, and sometimes using women as sexual objects.

Deriving from the issues surrounding marianismo and machismo is the place of culture in driving the spread of HIV in Latin America. The existing culture promotes gender inequality,

with women health disregarded as important. It encourages the male population to take risks in their sexual activities, thus increasing their probability of being infected with HIV. In essence, maintaining the gender equality status quo within the society has contributed to increasing cases of HIV/AIDS in Latin America, especially since women remain in their insubordinate roles where they are unable to make decisions related to sexuality and reproductive health (Barker, & Das, 2004). This places cultural aspects as an important consideration in the Latin American HIV/AIDS scenario.

The spread of HIV/AIDS is also affected by the stigmatization and rejection facing PLWHA as well as the rule of silence surrounding the disease. Among rural and poor populations, HIV/AIDS is shrouded in silence, denial, and hesitation, with stigmatization and rejection marking those instances where it becomes spoken (UNAIDS, 2001; Aggleton, Parker, & Maluwa, 2003). As Smallman (2007) puts it, the Latin American case of HIV/AIDS reflects a strong case of taboo subjects, which reflects the social and cultural aspects of the disease since society and culture dictates people's response to the disease.

## **2.5. Comparison of HIV Cases in Latin America**

As previously noted, the incidence for HIV/AIDS in Latin America differs among countries showing variations in infections and rates as well as similarities. To showcase some variations, a comparison of Panama and Guatemala that have relatively high rates is provided. Panama has a national rate of approximately 1.0% as of 2008, which is mostly concentrated in urban areas and among specific population groups (AVERT, 2010b; Licda & Martinez, 2005). The high risk groups in Panama include sex workers, homosexuals, and MSM, making sex related infections the number one concern at 67.4%, followed by antenatal transmission at 3.7%, and blood transfusion at 2%, while unknown transmission mode takes 26.9% (Licda, &

Martinez, 2005). This agrees with regional trends where sexually related transmissions are important in the mode of transmission.

In Guatemala, which has an infection rate of 0.8 %, sexual transmission also takes the first position. However, unlike Panama where sex workers take the first position, in Guatemala, MSM have the highest prevalence followed by commercial sex workers at 11.5% and 5-10% respectively (Bortman, Saenz, Pimenta, et al., 2006).

When considering age and gender representations, most countries have higher rates of male PLWHA compared to women. For example, among people aged 15-24 all countries apart from Guyana and Belize young men have the higher rates, while in the two named countries young women have about three times higher rate compared to young men (KFF, 2008). This is also true for generations starting at 15 years and older, where women have a 32% infection proportion, although the number is increasing in countries such as Argentina, Brazil, Peru and Uruguay.

## **2.6. Summary**

Across the literature review most authors agreed that knowledge, attitude, belief, and behavior are important attributes to the spread of HIV/AIDS in Latin America. This emerges from organizational reports such as from KFF (2008, 2009), UNAIDS (2001, 2020), and Avert (2010a, 2010b) as well as from research conducted using surveys, observation, interviews, controlled trials, and systematic review (Smallman, 2007; Garcia-Abreu, 2002; Egger et al., 2000). However, most of the generated information is mostly country specific thus limiting the whole Latin American picture, especially as authors seem to concentrate on those countries such as Brazil and Mexico and groups such as CSW and MSM that have higher infection rates. Furthermore, information on the knowledge, attitudes, beliefs, and behaviors attributed to



HIV/AIDS is mostly hidden within studies reflecting on aspects such as condom use, community response, reproductive health, and cultural adaptation thus lacking a complete picture provided within one document. The current study will consolidate available information on knowledge, beliefs, attitudes, and behaviors using a meta-analysis to provide a more complete picture on these aspects of the HIV/AIDS epidemic in Latin America. This will contribute toward understanding the uniqueness of the HIV/ADS epidemic in Latin America noting its diversity and country representations, which will be useful in defining appropriate counter measures in addressing the epidemic.

## **Chapter III: Research Methodology**

### **3.1. Introduction**

The aim of the current study is to examine the knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS in Latin America using a meta-analysis. The study will contribute toward enabling the region to define appropriate measures to address the epidemic challenge by consolidating the available information on HIV/AIDS. This chapter explains the research methodology utilized to satisfy the research objective, by explaining the design, procedures, instruments, plans for data analysis, and study limitations.

### **3.2. Research Sample**

The research sample includes two articles selected from the Sage database. The articles report on studies conducted in relation to HIV/AIDS in Latin America. Due to the magnitude of research available on the Latin America HIV/AIDS epidemic, the articles were selected for their relevance to HIV/AIDS knowledge, attitudes, beliefs, and behaviors for specific groups in Latin America as well as the period of their writing.

### **3.3. Research Design: Meta-Analysis**

The research used a meta-analysis, a quantitative research design that allows the researcher to integrate results from existing studies to identify emerging patterns and underlying causalities (Lipsey & Wilson, 2001; Cooper, Robinson, & Dorr, 2006). Through meta-analysis, the researcher gathers, processes, assimilates, and synthesizes data related to the topic thus coming up with the most relevant and that which address the research problem. In the current

research, two studies were chosen through the procedures explained in this chapter. The studies were later analyzed to generate the data required for the research.

### **3.4. Procedures**

#### **3.4.1. Database and Search Strategy**

The researcher conducted an electronic database search for ProQuest Central, EBSCO, MEDLINE, JSTOR, and Sage databases looking for peer-reviewed and articles written from 2005 to 2010. The search was conducted using various search phrases among them HIV/AIDS knowledge, attitudes, beliefs, and behaviors in Latin America, this was narrowed down to HIV/AIDS knowledge in Latin America, HIV/AIDS attitudes in Latin America, HIV/AIDS beliefs in Latin America, and HIV/AIDS behaviors Latin America. Other search phrases were machismo and marianismo in HIV/AIDS Latin America, HIV transmission knowledge in Latin America.

Various limitations were applied during the electronic search. For example, the initial search was conducted with Boolean phrases, with applied limitations being peer-reviewed and full text only. Further, the period limit was applied where January 1, 2005 to December 31, 2010 was the applied range. This ensured the articles were scholarly, peer-reviewed, accessible, and within the period. The accessibility became an important factor after the preliminary search had begun as explained in the subsequent paragraph.

Using the various electronic databases, the search generated approximately 5,000 articles. However, JSTOR articles were eliminated because of publication period, which was below the selected 2005-2010, while ProQuest central was eliminated because among the 22 scholarly and peer-reviewed articles generated they were not highly relevant to the study scope. This left MEDLINE, Sage Journals Online, and EBSCO. MEDLINE proved useful in helping focus the

search scope to transmission knowledge, and behavior, which were search terms that were providing more relevant articles. However, accessibility for the most articles was limited, hence the decision to use Sage Journals Online and EBSCO, which offered a wide range of articles that were narrowed down to the two used in the meta-analysis.

### **3.4.2. Article Inclusion and Exclusion Criteria**

The researcher searched Sage Journals Online and EBSCO to identify studies eligible for examining knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS in Latin America. To qualify for inclusion, the article or study must have focused on a population identifying with Latin America, whether a country or a certain group. Further qualifications were that the study collected primary data using an identifiable technique such as survey or interviews, specified participants, and area of study. The study must also have reported on aspects relating to HIV/AIDS knowledge, attitudes, beliefs, and behaviors.

In the selection, thirty-four citations were generated after searching for HIV transmission knowledge, gender roles, sex, and condom use in Latin America. This was then narrowed down to those articles that specifically focused on Latin American populations whether adults or adolescents, or women and men. This came to fifteen articles, which were then evaluated for primary data collection, bringing them to five articles. The rest of the articles were eliminated either because they reported on a review of literature, meta-analysis, or they were scholarly articles but not research articles where data was collected using secondary or primary data. These were evaluated for eligibility by considering applicability to Latin America as a whole as opposed to only one area, which led to two citations that will be used for the meta-analysis.

### **3.4.3. Data Abstraction**

Following the selection of the studies, the researcher then identified general characteristics for the article such as date of publication and study and location; quality aspects including form of data collection technique used, length of the study and participant characteristics. The studies were also checked for findings related to the research questions, and coded accordingly.

### **3.5. Data Synthesis**

Due to the type of data chosen, it becomes difficult to calculate effect sizes since much of the information gotten was qualitative. Therefore, the researcher chose to use thematic coding for the data analysis using six key themes namely, knowledge, attitude, belief, behavior, and influence of the four on the HIV/AIDS picture in Latin America. However, to ensure statistical significance in the data analysis, Gene Glass approach of determining size effect was utilized (Yu, 2010). The approach considers the effect size  $\theta$  is determined by the mean difference  $\mu$  of the two studies, divided by the standard deviation of the populations  $\sigma$ . The calculation is  $\theta = (\mu_1 - \mu_2) / \sigma$ . The standard deviation used is for one group.

### **3.6. Research Limitations and Delimitations**

The limitations of the study are found within the chosen method, meta-analysis. First, the study is limited to two articles, which reduces the possibility of generalizing the findings to the entire region. This would have been possible if articles were identified that covers the fourteen countries and represents the majority such as adults aged 15 and older that show higher rates of HIV/AIDS. Nevertheless, using two articles will still contribute to the available knowledge as it covers the scope identified for the study.

The second limitation is that because of the mechanical attribute of meta-analysis, the study may not recognize all the sensitive issues that may arise such as the social context of a study, theoretical influences and implications (Lipsey, & Wilson, 2001). Meta-analysis offers a closed-ended approach of summarizing findings, thus it limits the inclusion of many sensitive aspects of a study. To reduce this limitation the researcher will work toward identifying various different aspects shown in the two selected studies including design, procedure, results, conclusions, implications, methodology quality, and recommendations.

### **3.7. Summary**

This chapter offers an in-depth analysis of the research design and procedures utilized to conduct the study. The researcher chose to use a meta-analysis of two documents that will be categorized for results relating to knowledge, attitudes, beliefs, and behaviors of HIV/AIDS evident among Latin American men and women. The study population is from two articles chosen from Sage Journals Online and EBSCO from more than 4,000 articles. The articles were chosen for their relevance to the research objective and research questions. The chapter also includes the form of data synthesis that will be used, which is Glass's approach to derive effect size from the two studies. Further, the chapter points out limitations identified within the meta-analysis and the plan the researcher identifies to address them.

## **Chapter IV: Findings**

### **4.1. Introduction**

The chapter presents research findings using five research questions as a guide in thematic presentation of the results. The results show issues related to knowledge, attitudes, beliefs, behaviors or practices associated with HIV/AIDS in Latin America, and the way these affect the HIV/AIDS representation in the region. In formulating the findings, the researcher utilized two articles presenting discussions on primary research.

The first article was by Manji, Pena and Dubrow (2007), based on a cross-sectional survey of adolescents in León, the second largest city in Nicaragua. The researchers sought to determine knowledge, attitudes, beliefs, and practices among adolescents with a sample of 246 boys and girls aged 15-19 years with more details presented in the detailed table of the articles in the appendix. The second article was Fernández-Dávila, Salazar, Cáceres, et al. (2008) reporting on an ethnographic study testing for knowledge, beliefs, attitudes, and behaviors of heterosexual and homosexual men aged between 18 and 30 in Lima and Trujillo, Peru. This research was conducted as part of a study for the NIMH HIV/AIDS Collaborative Prevention Trial whose objective is to understand the said HIV factors toward attaining a workable prevention intervention (see appendix for more details). The reason why these articles were chosen in addition to meeting the criteria described in the methodology is that they directly concentrated on those factors considered for the study, knowledge, attitudes, beliefs, and behaviors as well as covered comparable topics namely homosexuality and heterosexuality, machismo and gender roles, and condom use.

## 4.2. Knowledge related to HIV/AIDS

Emerging from the study is that people within Latin America understand risks associated with HIV/AIDS. For example, heterosexual activities are identified as significant to HIV transmission by the age group 15 to 30 representing the age included in the entire study. As shown in Table 2, heterosexual activities emerged as the main transmission factor mentioned in the reviewed studies, where the participants believed engaging in virginal intercourse promoted risk perception. The second identified factor was failure to use a condom promoted HIV risk, although this did not promote use of condoms whether for heterosexuals or homosexuals. Other identifiable factors were people knew drug users were at risk of infection, blood transfusion, and possibility of mother to child transmission.

Table 2: Associated Risk for HIV (5= Most, 1=Least)

Risk Factor	Scale of Importance
Heterosexual activities	5
Poor condom use	4
Drug use	3
Blood transfusion	2
Mother to child transmission	1

An important factor prevailing in the research is poor association of anal sex with HIV/AIDS. Among the younger generation of adolescents, it was noted that participants reported reduced association for anal sex and HIV transmission. This was also reported among adults that accommodated anal sex, although among this group there was knowledge of possible infection and fear. The arising assumption here is that people engage in anal sex without a condom for



protection, a factor arising due to poor association or other factors limiting condom use such as need to encourage trust.

### **4.3. Attitude toward HIV/AIDS**

Arising from the study is the importance of gender roles to HIV/AIDS epidemic in Latin America. Men come across as the dominant partner in sexual activities. For example, women are discouraged to initiate sexual activities since the man has the prerogative to approach and request for sexual relations from the woman. Additionally, women that act on their sexual needs are perceived as weak, easy, and impure. This cultural attributes encourages male dominance.

The role of machismo is an important characteristic of public life. Machismo is not synonymous with strict male dominance as significant to determining sexual activity and beliefs in the region. It dictates bargaining power, such as for condom use where men have the higher bargain with women and the feminized homosexual expected to follow the decision of the dominant male. Therefore, if the man does not choose to use a condom then the partner will likely engage in sexual intercourse irrespective of the danger presented since their role is subservient and submissive. More over, the traditional male-female relationship assumes that the woman puts her husband's wishes before her own. Due to machismo, people belief that women should refrain from having sex outside of marriage, or in case they engage in sex and without the benefit of marriage, it should be within a stable partner. The same does not apply for men that can have extramarital affairs without fear of recriminations.

An associate of machismo is masculinity, found under the general conception that men should act as real men. A real man is one that will take control of their sexual encounters from

the initiation. Part of masculinity involves being introduced substantially early to sexual activities for boys compared to girls at a ratio of 2:1.

Another arising attitude among the Latin American people is stigmatization of people with HIV/AIDS. A fear of people with the virus exists to the point that some are still afraid to use the same utensils or use same bathroom with people known to have the virus. Contributing to the stigmatization is homophobia, especially since HIV/AIDS is highly associated with homosexuals.

#### **4.4. Beliefs Associated with HIV/AIDS**

An essential factor to the spread of HIV/AIDS in Latin America is homosexuality. Notably, homosexuality does not occur exclusively among people that self-identify as homosexuals but also among heterosexuals that seek homosexuals for various reasons. Some of the reasons contributing to bisexuality is the need to experiment such as in the case of young adolescents, whose first sexual encounter is with homosexuals but later engage in heterosexual activities; while another reason is materialism, where need for economic gain contribute to people seeking homosexuals because they are better economically placed (Fernández-Dávila et al., 2008).

However, irrespective of the role homosexuality plays in the Latin American society, people still frown upon it, with some considering it a taboo. For example, adolescents in the first study at 89% and 86% disapproved of MSM and women having sexual relations with other women respectively (Manji et al., 2007). Disapproval for homosexuality has even put some of them at risk since they are vulnerable to attacks by society.

Another emerging belief in the study is the seeming misconception that healthy looking people are free of HIV/AIDS. When asked, adolescents agreed they would have sexual relations with healthy looking persons, a factor that is also shared by the adult population. This also contributes to part of lacking HIV/AIDS knowledge, since looking healthy does not necessary mean one is free of HIV/AIDS but could be because their immune systems are still strong or they are under anti-retroviral therapy.

#### **4.5. Behaviors Representing the HIV/AIDS Epidemic**

Relevant to the discussion on behaviors and practice related to HIV/AIDS in Latin America are sexual identification, initiation, and condom use. In relation to sexual initiation, early sexual initiation for boys was noted with a later initiation for girls. The late sexual initiation for girls is a factor attributed to the discouragement for women to engage in sexual activities. Moreover, society encourages women to have sexual encounters within the marriage institution or with stable partners. Additionally, women may not approach men for sexual favors since they might be termed as easy, impure, and bad. Notably, the culture promotes masculinity, with women expected to remain within their traditional roles of being subservient.

Sexual initiation for boys was not limited to heterosexual encounters, but also extended to homosexuality. The reasons for homosexuality acting as an important initiation aspect is that homosexual men pick-up young boys from pubs under the guise of economic benefits. The boys will fulfill the homosexual needs and in return get alcohol and other material benefits that they may require. Another reason for homosexual first encounter is that homosexuals are more available for the young boys compared to women, where the ration for first encounters for young people with homosexuals to women is 4:1.

Most people in the Latin American society report to being heterosexuals; unfortunately, this group is increasingly becoming important to HIV/AIDS transmission in the region. The heterosexuals engage in sex with both women and men, increasing their risk for transmitting the virus from one group to other. Additionally, their perception for vulnerability is decreased by the misconceptions related to machismo, masculinity, and gender roles. Being a dominant and perceived healthy male is more important to the society than fear for contracting sexual related illnesses. This increases the risk for men engaging in unprotected sex.

The third significant risk behavior is inconsistent use of condoms. Again contributing to this inconsistency is the role of the dominant male partner coupled with issues of trust, and traditional gender roles. The man, both in homosexual and heterosexual relationships, holds the decision for using a condom, and therefore may decide not to use it increasing the risk for themselves and their partners. This also discourages partners from requesting the man to use a condom since they may offend or show mistrust. When a person requests another to use a condom, it is perceived as a suspicion and may be suggesting the partner could be dirty or infected. Augmenting such perception is the practice where men use condoms with their female partner for hygiene purposes.

Further, society has socialized the woman to respect the wishes of their male partners and be secondary decision makers in relation to sex. This means that they will not request condom use, unless under the guise of preventing pregnancy, which may not apply when they are under other contraceptive methods. Additionally, a general fear exists (90%) in women where they feel by asking their partner to use a condom, they are communicating mistrust, which undermines the male partner.

Other issues attributed to condom use inconsistency is the perception that a condom diminishes pleasure and for religious benefits. In relation to pleasure, the analogy of eating a sweet with a wrapper still on applies, where people feel that by wearing a condom they will not attain the full pleasure they otherwise would if they did not wear one. This is because a condom minimizes the contact and thus the pleasure attained. For the religion argument, the perception is that condoms are unreligious, a factor emerging from the catholic religious background of the Latin American region.

#### **4.6. Effect of Knowledge, Attitudes, Beliefs, and Behaviors in Latin**

##### **America's HIV/AIDS scenario**

The research findings indicate pertinent negative implications in the spread of HIV/AIDS in Latin America. This is because of emerging misconceptions related to the spread of HIV/AIDS, such anal sex, and condom use. Another factor is the place of masculinity, machismo, and traditional gender roles that contribute to decisions that endanger the population. For example, maintenance of the dominant male ideology contributes to early initiation of the young males and having multiple sexual partners with both men and women, which in effect endangers all parties involved. The implications are that unless a change is attained in the knowledge, attitudes and beliefs as well as current behaviors to accommodate the risk for HIV infections, the Latin American region will continue suffering high rate levels of infection.

#### **4.7. Other Interesting Findings**

During the study, it was interesting to note that myths and misconceptions continue to exist especially among the younger generation decades after the discovery of HIV/AIDS. Another interesting aspect found in the study is the ability of homosexuals to manipulate both

young and older males with the promise of financial gain. Poverty makes them vulnerable; therefore it is easier to offer material gain in return for sexual favors given.

#### **4.8. Summary**

The research findings provide insight into the knowledge, attitudes, beliefs, and behaviors of Latin Americans. In Latin America, people know the risks of contracting HIV through heterosexual activities, though infection through anal sex is not widely accepted. Gender roles, machismo, and masculinity play an important role in the attitude and behavior related to HIV/AIDS, with stigmatization and misconceptions about a healthy looking persons prevailing. Additionally, the study also shows inconsistent condom use due to factors of trust, social values, and perceived pleasure.

## **Chapter V: Conclusion, Implications, and Recommendations**

### **5.1. Introduction**

This chapter gives a summary of major research findings by highlighting those found pertinent to the discussion. It also offers a brief summary of the methodology and conclusion drawn from the study in relation to the research question. Included in the chapter are implications for public health theory and practice as well as recommendations for future research.

### **5.2. Summary of Study**

Latin America presents a seemingly positive HIV/AIDS scenario where the region has achieved a stabilization of the threat within the last decade. However, different areas such as Guyana still show high prevalence, demonstrating failure to achieve reduce rates in all countries. Additionally, the knowledge, attitudes, beliefs, and behaviors reflect a somewhat negative image, where the disease is evolving from traditionally affected groups to new risk groups such as heterosexual infections. This is an attribute of decreasing age for first sexual encounter and behaviors associated with the spread of the virus. Within this depiction, the study sought to highlight the knowledge, beliefs, attitudes, and behaviors related to HIV/AIDS in Latin America as a foundation for gaining positive changes in the region. Therefore, this research involved conducting a meta-analysis on the available knowledge, represented attitudes, beliefs, and behaviors in Latin America.

To conduct the study, the research used a meta-analysis approach, where two articles were identified for their relevance to the topic under discussion, and reporting on a primary research. The selection was for articles written between 2005 and 2010, and published in peer-reviewed journals.

The results attained in the study showed specific knowledge available in the region as well as lacking knowledge. Prevailing in the research is that people associated heterosexual activity with possible risk for infection, but did not consider anal sex as a high risk factor. In relation to attitude related to HIV/AIDS in Latin America, women are discouraged from pursuing sexual encounters, while men are encouraged to take control. Dominating Latin American attitude is the need to maintain the dominant male figure in sexual relations, traditional gender roles, and machismo, as men are encouraged to pursue sexual encounter as an active male. Related to beliefs is continued stigmatization for people with HIV, failure to believe healthy looking people can be infected with the virus, and failure to recognize the place of homosexuality in the region.

Behavioral trends associated with HIV/AIDS shows early sexual initiation for boys and later initiation for girls; since women are discouraged from sex outside marriage, and poor use of condoms due to factors related to maintaining trust. The conclusion derived from the findings is that traditional gender roles, maintaining masculinity, trust, and machismo have been significant factors in promoting the spread of HIV/AIDS and they will be significant in combating the high prevalence in those countries still suffering under the epidemic.

### **5.3. Conclusion**

Knowledge related to HIV/AIDS is that gay men, and drug users are at greater risk of contracting the disease, an attribute of the infection being traditionally associated with homosexuality (Smallman, 2007). Emerging in the current research is that this trend is changing as people begin to associate infections with heterosexual relationships.

In relation to attitude, surrounding HIV/AIDS picture in Latin America are misconceptions and stereotypes related to gender roles. In the existing research it was noted that



society promotes a power relationship that undermines women through the concept of *marianismo* (Zometa et al., 2007). Further, HIV/AIDS attitude is defined within the previous research by gender inequality with the man being the dominant partner in sexual relations has highly contributed to the spread of HIV, since it encourages men to take risks while disregarding the desires of their partners such as in condom use (Smallman, 2007; Barker, & Das, 2004; Schutt-Aine, & Maddaleno, 2002). The current research confirmed this picture, showing that male socialization towards masculinity and machismo controls the male behavior in sexual practices. In effect, men are highly active, and fail to use condoms since they will undermine their masculinity.

Further, HIV/AIDS picture in previous research shows stigmatization and rejection for PLWHA, as well as issues surrounding AIDS being a taboo (UNAIDS, 2001; Aggleton et al., 2003; Smallman, 2007). This belief system has been confirmed in the current research in which taboos of homosexuality are significant transmission factors is existence, while stigmatization continues to exist in the society.

Behavior noted in the previous research related to the HIV/AIDS epidemic in Latin America is poor condom negotiation especially for women (Barker, & Das, 2004; Smallman, 2007). Current research confirmed this tendency, but extended it to include homosexual persons, young or adolescents, as well as men and women in steady relationships. In addition, the current research also showed that early initiation into sexual activities for boys, discouragement of girls to engage in sexual activities, and heterosexual relationships are important factors in HIV/AIDS infection in the current society.

#### **5.4. Implications for Theory and Practice**

The assumption defining the current research was that by understanding knowledge, attitudes, beliefs, and behaviors surrounding HIV/AIDS, then it is possible for the public health sector to assess and develop appropriate control measures in Latin America. Moreover, it shows that cultural attributes related to marianismo, machismo, and gender roles; early male initiation; and heterosexual relationships are emerging important factors in spread of the virus. Therefore, preventive practices should be focused in underscoring the importance of these attributes where the public health sector should educate the society and make them understand how upholding these factors contribute to the HIV/AIDS epidemic.

#### **5.5. Recommendations**

As indicated in the literature review, research findings have clearly indicated gaps in Latin American knowledge, attitudes, beliefs, and behaviors related to HIV/AIDS. Based on these findings, future research should investigate possibilities of mitigating the negative attribution of culture by considering first its implications then ways to minimize the negative results.

Another recommendation is for the public health sector to establish education centers that can underscore role of traditional gender roles, machismo, marianismo, masculinity and trust in promoting infections. Concentration should also be made on giving women and feminized homosexual negotiating power in sexual relations, possible through public education to reduce their vulnerability to the HIV/AIDS infection.

By defining the societal ideals for feminine and masculine behavior and sexuality, socio-cultural factors greatly affect women's and men's access to information and services, their sexual

behavior and attitudes, and how they cope with illness once infected or affected by the HIV/AIDS epidemic.

Addressing these gender inequities and changing societal definitions of masculinity and femininity are no small challenge. They require significant and sustained social change, even though, it is now well accepted that the socio-cultural and economic factors that subordinate women and trap men in damaging patterns of sexual behavior are compromising the rights and freedoms of individuals and, through the HIV/AIDS epidemic, promoting a cycle of illness and death. In view of the fact that gender inequities and many traditional societal norms are now fatal can provide no stronger argument for them to be change.

## Reference List:

- Aggleton, P., Parker, R., & Maluwa, M. (2003). Stigma, Discrimination, and HIV/AIDS in Latin America and the Caribbean. *Inter-American Development Bank – Sustainable Development Department Technical Papers Series*.
- Avert. (2010a). *HIV and AIDS in Latin America*. AVERT.org. Retrieved from <http://www.avert.org/aidslatinamerica.htm>
- Avert. (2010b). *Latin America HIV & AIDS Statistics*. AVERT.org. Retrieved from <http://www.avert.org/southamerica.htm>
- Barker, G., & Das, A. (2004). Men and Sexual and Reproductive Health: The Social Revolution. *International Journal of Men's Health*, 3(3), 147.
- Bortman, M., Saenz, L. B., Pimenta, I., Isern, C., Rodriguez, A. E., et al. (2006). *Reducing HIV/AIDS Vulnerability in Central America Guatemala: HIV/AIDS Situation and Response to the Epidemic*. Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank.
- Cooper, H., Robinson, J. C., & Dorr, N. (2000). In F. T. Leong, & J. T. Austin, *The Psychology Research Handbook: A Guide for Graduate Students and Research Assistant (2ed Ed)*. Thousand Oaks, CA: SAGE Publications.
- Egger, M., Pauw, J., Lopatzidis, A., Medrano, D., Paccaud, F., & Smith, G. D. (2000). Promotion of Condom Use in a High-Risk Setting in Nicaragua: A Randomized Controlled Trial. *The Lancet*, 355(9221), 2101-2105.
- Fernández-Dávila, P., Salazar, X., Cáceres, C.F., Malorana, A., Kegeles, S., & Martinez, J. (2008). Compensated Sex and Sexual Risk: Sexual, Social and Economic Interactions

- between Homosexually- and Heterosexually-Identified Men of Low Income in To Cities of Peru. *Sexualities*, 11(3), 353-374.
- Garcia-Abreu, A., Noguera, I., & Cowgill, K. (2003 March). *HIV/AIDS in Latin America: The Challenge Ahead*. HNP Discussion Paper.
- Gutstein, S. E., & Sheely, R. K. (2002). *Relationship Development Intervention with Children, Adolescents, and Adults: Social and Emotional Development Activities for Asperger Syndrome, Autism, PDD, and NLD*. London, UK: Jessica Kingsley Publishers.
- Health Studies Branch. (1995, November 15-18). *HIV/AIDS in Latin America and the Caribbean*. U.S. Bureau of the Census, Health Studies Branch International Programs Center Population Division, Research Note No. 19. Prepared for the Latin American Congress on STD, Panamerican Conference on AIDS Santiago, Chile.
- Herbst, J. H., Kay, L. S., Passin, W. F., Lyles, C. M., Crepaz, N., & Marin, B. V. (2006). A Systematic Review and Meta-Analysis of Behavioral Interventions to Reduce HIV Risk Behaviors of Hispanics in the United States and Puerto Rico. *AIDS Behav*, 11, 25-47.
- Higgins, C., & Norton, B. (2010). Applied Linguistics, Local Knowledge and HIV/AIDS. In C. Higgins, & B. Norton (eds), *Language and HIV/AIDS*. Bristol, UK: Multilingual Matters.
- HIV InSite. (2010). *HIV/AIDS in Latin America*. University of California, Center for HIV Information. Retrieved from <http://hivinsite.ucsf.edu/global?page=cr05-00-00>
- Joint United Nations Programme on HIV/AIDS. (2001). *Appropriate Communication for Behavior Change – A Cultural Approach to HIV/AIDS Prevention and Care*. Methodological Handbooks, Special Series, Iss. No. 1. UNESCO.
- Joint United Nations Programme on HIV/AIDS. (2010). *Global Report: UNAIDS Report in the Global AIDS Epidemic 2010*. Joint United Nations Programme on HIV/AIDS.

- Licda, H. A., & Martinez, L. (2005). *Report in Progress Made on the National Response to the HIV/AIDS Epidemic: Panama January 2003-December 2005*. Prepared for the Ministry of Health National STI/HIV/AIDS Program.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical Meta-Analysis*. Thousand Oaks, CA: SAGE Publications.
- Maio, G. R., & Haddock, G. (2009). *The Psychology of Attitudes and Attitude Change*. Thousand Oaks, CA: Sage Publications Ltd.
- Manji, A., Pena, R., & Dubrow, R. (2007). Sex, Condoms, Gender Roles, and HIV Transmission Knowledge among Adolescents in Leon, Nicaragua: Implications for HIV Prevention. *AIDS Care*, 19(8), 989-995.
- Schutt-Aine, J., & Maddaleno, M. (2002). Addressing Machismo with Adolescent Males – A New Approach to HIV/AIDS Prevention: Pan American Health Organization Research and Experiences in Latin America. *International Conference on AIDS, 14*.
- Smallman, S. (2007). *The AIDS Pandemic in Latin America*. Chapel Hill: The University of North Carolina Press.
- Smith, W. (2002). From Prevention Vaccines to Community Care: New Ways to Look at Program Success. In R. C. Hornik, *Public Health Communication: Evidence for Behavior Change*. Mahwah, NJ: Lawrence Erlbaum Associated, Inc., Publishers.
- Stevens, E.P. 1973. Marianismo: The other face of machismo in Latin America. Pp. 89-101 in A. Pescatello, ed. *Female and Male in Latin America*. Pittsburgh: U of Pittsburgh.
- Stolley, K.S., & Glass, J. E. (2009). *HIV/AIDS*. Santa Barbara, California: ABC-CLIO, LLC.

- The Body. (2010). *HIV & AIDS in Latin America/The Caribbean*. New York, NY: The HealthCentral Network, Inc. Retrieved from [http://www.thebody.com/index/whatis/demo\\_latinam.html](http://www.thebody.com/index/whatis/demo_latinam.html)
- The Henry J. Kaiser Family Foundation. (2008 July). Fact Sheet – The HIV/AIDS Epidemic in Latin America. *HIV/AIDS Policy*.
- The Henry J. Kaiser Family Foundation. (2009 November). Fact Sheet – The HIV/AIDS Epidemic in Latin America. *HIV/AIDS Policy*.
- Yu, C-H. (2010). *Meta-Analysis and Effect Size*. Retrieved from <http://www.creative-wisdom.com/teaching/WBI/es.shtmls>
- Zometa, C. S., Dedrick, R., Knox, M. D., Westhoff, W., Siri, R. S., & Debaldo, A. (2007). Translation, Cross-Cultural Adaptation and Validation of an HIV/AIDS Knowledge and Attitudinal Instrument. *AIDS Education and Prevention*, 19(3), 231-244

## Appendix

Study, location, dates	Design	Sample and setting	Study Description	HIV Features in Latin America			
				Knowledge	Attitude	Belief	Behavior
Manji, Pena, and Dubrow (2007) León, Nicaragua	Cross-sectional survey – adolescents were approached between July and August 2003 to participate in the study.  Completed a structured survey instrument [ <i>standard deviation and proportions</i> ]	a) Participants: 246 adolescents aged between 15 and 19 years [ <i>came from urban neighborhoods in León gotten from the Demographic and Health Surveillance System</i> ]	The survey responded to the need for understanding factors surrounding HIV/AIDS transmission in a high risk country, Nicaragua.  TEST- sought to determine HIV/AIDS related knowledge, attitudes, beliefs, and practices of adolescents in León. [ <i>León</i>	Prevailing knowledge <90% is HIV is transmitted through heterosexual activities, blood transfusion, drug injection, sex without condoms, MTC.  Poor knowledge on transmission through anal sex 66%,	Stigma is still significant, 69 would hide condition.  Machismo – women should not have sex out of marriage, or only with a stable partner 56, men can do it with anyone 66, 76 disagreed on men being the only people to decide on condom use, 85 said women should	89 disapproved of MSM and 86 WSW.  having sex with a healthy looking person but infected 59%	prevalence for heterosexual intercourse was higher for boys than girls 62 to 31, inconsistency in condom use  Condom use – variant [ <i>57% would use with occasional partners, 87 considered better to forego without condom, 35 believed a condom diminished pleasure, 9 avoid condom</i> ]



	<i>were useful in analysis]</i>		<i>is the second largest city in Nicaragua. The country population is mostly below 25 and under or unemployed]</i>	oral sex 50%, and Correct knowledge on myths – mosquito bites 79%, utensils 75%, kissing 71%, bathrooms 68%	ask without fear of coming across as not trusting the man, while 90 said the man can use a condom without fearing the partner will think they don't trust them. 86 said women can enjoy and have similar rights to men, and 65 thought even women can approach men.		<i>use as it is unreligious].</i>
Fernández-Dávila, Salazar, Cáceres, Maiorana, Kegeles,	Interviews – lasting 1hr Focus groups – lasting 90	a) participants: 23 individual interviews [10 in Lima, 13 in Trujillo] 7 focus groups [5 in	Ethnographic study for NIMH HIV/AIDS Collaborative Prevention	Most homosexuals understand sexual risks and prevention	Gender roles – breastfeeding, penetration Women need not show she wants sex or	Taboo for homosexuality Homosexual men are more available for	Maricones – purchase sexual favors, encourage sexual orientation

<p>Coates, and Martinez (2008)</p> <p>Lima, the capital of Peru and Trujillo, on northern coast of Peru</p>	<p>min</p> <p>Specific instrument – semi-structured interviews [<i>audio taped and transcribed verbatim</i>]</p>	<p><i>Lima, 2 in Trujillo</i></p> <p>Young men aged 18-30 years</p> <p>Two groups – mostaceros [heterosexuals] and mariconas [homosexuals]</p> <p>b) setting two neighborhoods in Lima and one in Trujillo</p>	<p>Trial</p> <p>Content - interaction dynamics in sexual, economic, and social aspects between mostaceros and mariconas</p> <p>Test – knowledge, beliefs, attitudes, and behaviors of population segment</p>	<p>and fear infection – but condom use is inconsistent because of need to maintain a partner, or don't care attitude, mastacero have the decision card,</p> <p>Ignorance among the younger people – adolescents [80% in 1<sup>st</sup> encounter with gay]</p>	<p>try different acts or she is easy, impure, and bad</p> <p>[culture is an important factor – encourage male initiation, while discouraging women]</p> <p>Masculinity – importance of a real man</p> <p>Homophobia-violence against mariconas especially transvites, also discrimination, and ridicule</p> <p>Materialism</p> <p>Need for</p>	<p>initiation sex</p> <p>Healthy people are free from STI/HIV</p>	<p>Mostaceros – sexual experimentation, younger men need the mariconas more for the economic benefits</p> <p>Alcohol and drugs especially among young people</p> <p>The heterosexual group serves as a transmitter for STI/HIV – they have sex with mariconas and women</p> <p>Sex in public places such as bars – increases risk behavior, rush, and diminish</p>
---	--	--	--	--	--	---	--

					stable relationship  Self-deprecation, and criticism due to low self-esteem, mistreatment, rejection, and discrimination		condom use  Use condom with female partners for hygiene and to avoid pregnancy  Women do not request condom use due to norms and values of traditional gender roles
--	--	--	--	--	--	--	---