

University of Louisville

ThinkIR: The University of Louisville's Institutional Repository

Electronic Theses and Dissertations

5-2010

Health promotion self-efficacy of Belizean nurses : variables influencing condom use promotion to women to prevent HIV/AIDS.

Whitney A. Nash
University of Louisville

Follow this and additional works at: <https://ir.library.louisville.edu/etd>

Recommended Citation

Nash, Whitney A., "Health promotion self-efficacy of Belizean nurses : variables influencing condom use promotion to women to prevent HIV/AIDS." (2010). *Electronic Theses and Dissertations*. Paper 1043.
<https://doi.org/10.18297/etd/1043>

This Doctoral Dissertation is brought to you for free and open access by ThinkIR: The University of Louisville's Institutional Repository. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of ThinkIR: The University of Louisville's Institutional Repository. This title appears here courtesy of the author, who has retained all other copyrights. For more information, please contact thinkir@louisville.edu.

HEALTH PROMOTION SELF-EFFICACY OF BELIZEAN NURSES: VARIABLES
INFLUENCING CONDOM USE PROMOTION TO WOMEN TO PREVENT HIV/AIDS

By

Whitney A. Nash
B.S.N., Indiana University, 1986
M.S.N., University of Louisville, 1997

A Dissertation
Submitted to the Faculty of the
School of Nursing of the University of Louisville
in Partial Fulfillment of the Requirements
for the Degree of

Doctor of Philosophy

School of Nursing
University of Louisville
Louisville, Kentucky

May 2010

HEALTH PROMOTION SELF-EFFICACY OF BELIZEAN NURSES: VARIABLES
INFLUENCING CONDOM USE PROMOTION TO WOMEN TO PREVENT HIV/AIDS

By

Whitney A. Nash
B.S.N., Indiana University, 1986
M.S.N., University of Louisville, 1997

A Dissertation Approved on

March 16, 2010

by the following Dissertation Committee:

Dissertation Director

DEDICATION

This dissertation is dedicated to my husband Timothy P. Nash
and my mother Brenda M. Hall who have made it possible
to pursue not just this dissertation, but anything ever I wanted.

ACKNOWLEDGEMENTS

I would like to thank my chair, Dr. Robert V. Topp for his guidance, humor and patience for what seemed to be a lifetime. I would also like to thank the other members of my committee, Dr. Henry Cunningham, Dr. Ermalynn Kiehl, Dr. S. Lee Ridner, and Dr. Celeste Shawler for their direction. To my family, Tim, Mackenzie (Mac), Abigail (Abs) for their patience, cooperation, understanding, humor and encouragement. Tim, you are my biggest fan and your words always make me feel more important and smarter than I really am. To my mother, who was instrumental in the first part of this journey. You made sure I was able to begin my college career in the first place by helping me pursue my bachelor's degree. Finally, I would like to thank the members of the faculty at the University of Louisville who supported me while I worked with you as a colleague and learned from you as a student.

ABSTRACT

HEALTH PROMOTION SELF-EFFICACY OF BELIZEAN NURSES: VARIABLES INFLUENCING CONDOM USE PROMOTION TO WOMEN TO PREVENT HIV/AIDS

Whitney A. Nash

March 16, 2010

This dissertation is a descriptive, correlational study that explores how a nurse's personal sexual relationship power, vicarious experience, and other interpersonal and socio-cultural variables are related to her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV/AIDS. How these variables are related among a specific subset of nurses with lower sexual relationship power is also examined. Self-efficacy theory, specifically portions of Dr. Albert Bandura's work is used to guide this exploration. Chapter 1 introduces the problem of HIV/AIDS in Belize; the role of power, and selected issues surrounding women and HIV/AIDS. Chapter 1 also outlines the particular variables of interest and introduces the theoretical framework for the study.

Chapter 2 reviews the relevant literature surrounding the identified variables and identifies current gaps that warrant further investigation. Chapter 3 outlines the methodological strategy employed for data analyses. This chapter also discusses the specific plan to address issues surrounding data collection and missing data.

Chapter 4 presents the results of the psychometric analysis of the data collection instruments. All instruments included in this study were found to be psychometrically sound. Quantitative findings as well as the findings of the open-ended question are also

examined. Qualitative analysis revealed intrinsic and extrinsic reasons or influences impacting a nurse's decision to promote and teach condom use to women to reduce HIV risk. Significant findings from the quantitative analysis include a positive correlation between vicarious experience promoting and teaching condom use to women to reduce the risk of HIV and a nurse's self-efficacy to do so. While analysis of this same question did not reveal statistical significance in nurses with higher sexual relationship power statistical significance was found in a sub-set of nurses with lower sexual relationship power. Chapter 5 discusses results in the context of Bandura's theoretical framework. Limitations to the study are addressed. Finally, the relationship of the results to issues of clinical practice, future research opportunities and health policy is presented.

TABLE OF CONTENTS

	PAGE
DEDICATION.....	iii
ACKNOWLEDGMENTS.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	viii
LIST OF FIGURES.....	x
INTRODUCTION.....	1
CHAPTER 2-LITERATURE REVIEW.....	14
CHAPTER 3-METHODOLOGY.....	34
CHAPTER 4-DATA ANALYSIS.....	51
CHAPTER 5-DISCUSSION.....	80
REFERENCES.....	92
APPENDICES.....	103
CURRICULUM VITAE.....	114

LIST OF TABLES

TABLE	PAGE
1.	Ten Leading Causes of Hospitalization for Females 1997-2001.....22
2.	Plan for Quantitative Statistical Analysis.....44
3.	Description of Non-continuous Demographic Variables.....52
4.	Description of Continuous Demographic Variables.....54
5.	Background of HIV/AIDS Education and Experience.....56
6.	Principle Component Analysis of the Modified Sexual Behavior Efficacy Scale-Provider Attitude Questionnaire.....61
7.	Principle Component Analysis of the Vicarious Experience-Condom Use Promotion Scale.....62
8.	Principle Component Analysis of the Relationship Control Subscale of the Sexual Relationship Power Scale Initial Solution (SRPS-RC).....65
9.	Principle Component Analysis of the Relationship Control Subscale of the Sexual Relationship Power Scale, Final Solution.....66
10.	Relationship Between Independent Variables and Score on MSBES-PAQ68
11.	Description of Non-continuous Demographic Variables, Upper and Lower 50 th Percentile SRPS-RC.....71
12.	Description of Continuous Demographic Variables, Upper and Lower 50 th Percentile SRPS-RC.....73

13. Excerpts from and Analysis of the Open-ended Question.....77

LIST OF FIGURES

FIGURE		PAGE
1.	Social Cognitive Theory.....	4
2.	Contributors to Self-efficacy Development.....	5
3.	Hypothesis and Research Questions.....	43

CHAPTER I

The small country of Belize has a population of roughly 280,000, yet has the highest average annual prevalence rate (2.1%) of Human Immunodeficiency Virus (HIV) of any country in Central America (UNAIDS, 2008). The last quarter of 2007 saw a dramatic increase in the prevalence of this disease to 6% (National AIDS (Acquired Immunodeficiency Syndrome) Commission (NAC), Belize, fourth quarter 2007 report). Currently, approximately 80% of the new cases of HIV in Belize are found among 20-49 year olds. This age group is generally considered the most economically productive group and therefore the increased prevalence of HIV in this age group has far reaching economic implications. The primary risk (68%) of acquiring HIV in Belize comes from heterosexual exposure. When examining statistics specific to women, UNAIDS (2008) estimated that there are approximately 2,000 women currently living with HIV. According to Belize representative Dolores Balderamos Garcia, in her keynote address given at the launch of the National AIDS Commission, in 1995, when the HIV epidemic emerged in Belize the infection ratio was two men for every woman infected. By 2000 that ratio had fallen to 1.6 to 1 (Garcia, Feb 4, 2000). In the last quarter of 2007, 43% of the new cases of HIV were diagnosed in women, an increase from 38% in the previous year (NAC, Belize, fourth quarter 2007 report).

Although more men than women have been infected with the disease in the past, this gap is closing. The feminization of HIV worldwide, demonstrated by the trend

toward higher prevalence rates of the disease among women is an issue that has garnered much attention in both the professional and popular media. Johns Hopkins physician and professor of infectious disease Thomas C. Quinn, M. D. notes, “ HIV/AIDS first targeted gay men and hemophiliacs in the 1980’s, then subsequently spread among intravenous drug users and heterosexuals. Now, it is having the most profound impact on women” (Quinn & Overbaugh, 2005, p. 1582). The authors address the importance of targeting issues specific to women that are critical to this epidemic. Developing specific strategies that empower women is key to the success of any program directed at lowering HIV rates (Quinn & Overbaugh, 2005). The need to focus not just on awareness of the need to use condoms, but how to use them is critical. This need must be addressed from a gender perspective. “Reshaping gender roles, such as educating more women about safe- sex practices, use of condoms, lessons on negotiating safe sex, and awareness campaigns about where to seek testing and treatment are needed” (pg. 1582).

Bloom (2008), further underscores why women and the need for education may be central to fight against HIV. “Women and girls are often ill informed about sexual and reproductive matters and are more likely to be uneducated and illiterate” (pg. 1). Beyond education, physiologically, “women are four times more likely than men to become infected with HIV, but they lack the social power to insist on safer sex or to reject [unwanted] sexual advances” (pg. 1).

Power, specifically the power in sexual relationships, including decision-making regarding condom use for the reduction of HIV transmission appears to be an important consideration in addressing this epidemic. Although this issue has been studied among

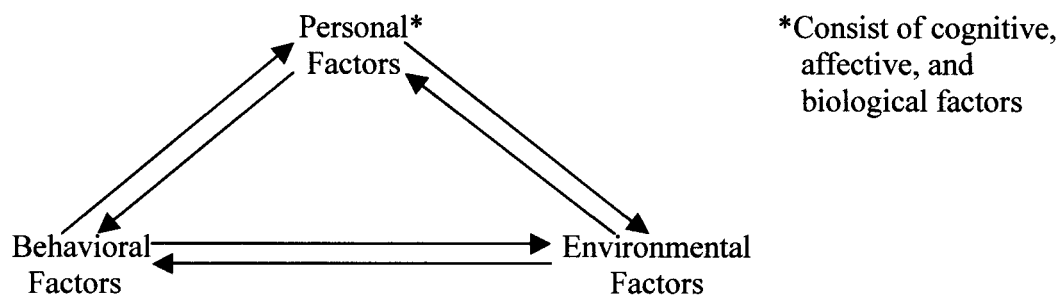
women in general, its influence among nurses and its impact on the delivery of health promotion information, specifically condom use, has not been examined.

The International Council of Nurses of which the Nurses' Association of Belize is a member, has been a key leader in bringing international attention to the issue of women and HIV and AIDS. The following statement underscores the importance of this issue internationally and the need to explore all variables that may contribute to the problem. "The virus (HIV) has exploited women's lack of power at every level; all the condoms, doctors, drugs and behavior change experts in the world can't stop it if we don't address the root causes of women's vulnerability" (AIDS-Free World, 2008). Education is at the foundation of empowerment. Beyond the provision of condoms, increasing exposure to correct and appropriate information, and providing women with the tools to negotiate their use is critical.

Wolf, Linsk, Mitchell and Schechtman (2004), suggest that nurses are in a pivotal position to effectively teach HIV prevention through the practice of safe sex, including condom use, to their female patients. There are abundant opportunities for nurses to promote and teach condom use to women to reduce the risk of contracting HIV. Nurses in Belize are employed in a variety of settings including outpatient and inpatient settings; rural and urban community practices as well as in organizations that specifically address issues impacting women such as the Belize Family Life Association (BFLA). According to the Director of the BFLA, Belize nurses unfortunately, may not be routinely teaching safe sex practices, especially condom use (Burke, J. personal communication, March 12, 2008). This statement was echoed by Matron Mavis Palacio (Director of Nurses) at the Karl Heusner Memorial Hospital in Belize City, Belize. "We need to do more to educate

women about condom use” (personal communication, March 12, 2008). It was unclear what variables might influence the self-efficacy of nurses to routinely teach condom use to their female patients to reduce their risk of contracting HIV. Bandura’s Social-Cognitive Theory identifies human behavior as an interaction of personal factors, behavior, and the environment. See Figure 1 (Bandura, 1977, 1986). Embedded in this theory is the influence of self-efficacy. Of all the thoughts that affect human functioning, and standing at the very core of social cognitive theory, are self-efficacy beliefs, "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura, 1986, p. 391). Self-efficacy beliefs provide the foundation for human motivation, well-being, and personal accomplishment. “Self-efficacy is defined as an individual’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave” (Bandura, 1994, p. 71).

Figure 1. Social Cognitive Theory (Bandura, 1977, 1986)

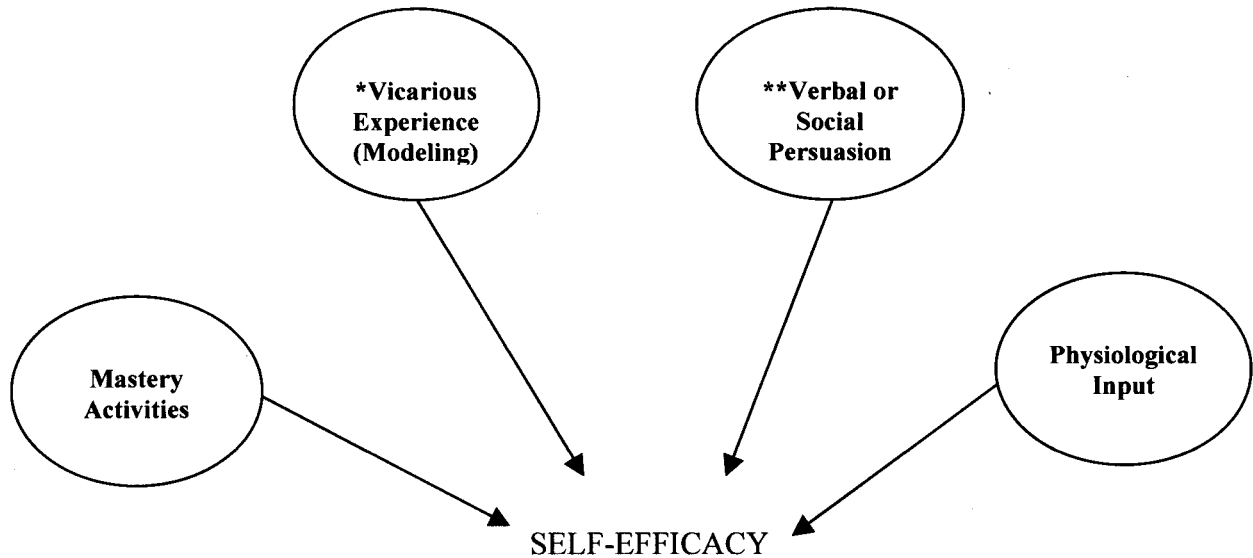


Bandura has identified four key components to the development of self-efficacy: Mastery activities (performance accomplishments), vicarious experiences (through observation of positive role models or mentoring), verbal/social persuasion and

physiological input (Figure 2). Mastery activities and vicarious experience are considered to be the most influential components to the development of self-efficacy.

Figure 2

Contributors to self-efficacy development



*Established variable to be evaluated in current study

**Hypothesized location of Sexual Relationship Power within the model

A women's sexual relationship power is the degree to which she participates in the decision making process regarding the sexual relationship. Included in this definition is the woman's participation in the decision for the couple to use a condom during sexual activity. How she interprets her degree of sexual relationship power has been shown to impact how much influence she has in decision-making within the relationship including the decision that the couple use a condom during sexual activity (Pulerwitz, Amaro, DeJong, Gortmaker & Rudd, 2002).

With the vast majority of nurses in Belize being female, the issue of sexual relationship power in their own relationships was thought to influence their self-efficacy

to provide information regarding condom use to their female clients to reduce the risk of contracting HIV. The relationship between this variable and previously identified contributing variables of self-efficacy in Belizean nurses had not been established. For this study, sexual relationship power was hypothesized to be a cognitive, personal variable (Figure 1), or more specifically a component of social persuasion or influence that impacts self-efficacy (Figure 2). Neff and Suizzo (2006) discuss power as an influence. When individuals feel that they currently are not able to make their own choices in a relationship, or if they are afraid of reciprocation from a more powerful partner, they may be less likely to communicate freely or engage in behaviors that authentically reflect their underlying thoughts or behaviors. This is echoed by Kernis & Goldman (2005).

Modeling or vicarious experience has been identified as one of the four major influences of self-efficacy (Bandura, 1997). The term role model was originally defined by Robert K. Merton in 1957 to distinguish between reference idols who are models for how to live our lives and those after whom we model a specific skill set (role models). The impact of a positive role model has been shown to increase self-efficacy. According to Bandura (1986), by their behavior and expressed ways of thinking, positive role models transmit knowledge and teach observers effective skills and strategies for managing environmental demands. Acquisition of effective skills and strategies for managing environmental demands raises self-efficacy to perform the desired task. "Observing [role] models enact AIDS-preventative behaviors then refining one's performance has proven to be particularly effective in equipping individuals with necessary AIDS-prevention behavior skills" (Fisher & Fisher, 1992, p. 469).

“Modeling informs and motivates. [Role] models provide information about what sequence of actions will lead to success and which actions have undesirable consequences. [Role] models can enhance self-efficacy among observers who are apt to believe that they, too, will be successful if they follow the same behavioral sequence. Models also motivate observers to perform the same behavior themselves [in anticipation of achieving the same desirable outcomes as the model] “ (Schunk, 2003, p. 163). In a qualitative study of U. S. nurses (Rush, Kee, & Rice, 2005) when asked about their feelings regarding role models, one nurse stated that without role models “we’re never going to learn anything that we could possibly strive for if we’re not ready to do it there and then” (p. 173). Other interpersonal variables such as experience within the role of interest (nursing) have been shown to increase self-efficacy to perform activities specific to the role (Bandura, 1997).

In this study the researcher explored how a nurse’s personal sexual relationship power, as well as other interpersonal and socio-cultural variables are related to her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV. How these variables are related among a specific subset of nurses with lower sexual relationship power was also examined.

Statement of Problem

The HIV/AIDS epidemic has inflicted a heavy human and financial toll on those countries most impacted by this disease. The impact of HIV/AIDS in Belize is difficult to quantify due to the variety of non-governmental agencies that delivery care and offer financial support to persons living with AIDS.

Financial burden. The 2008 Joint United Nations Programme on HIV/AIDS (UNAIDS) reports that a 57% increase in expenditures for HIV/AIDS related care and services was seen from 1999 to 2002. It is important to note that during that same time period there was an 85% increase in assistance from sources outside the government. In 2003, The World Health Organization (WHO) reported that Belize had spent 1.6 million USD on HIV/AIDS related services with 43% of the expenditure on direct care. A primary source of these funds has come from the Global Fund to Fight AIDS, Tuberculosis and Malaria (World Health Organization-Belize).

In 2006 and 2007 the Ministry of Health reported that the national budget provided \$400,000 U.S. Dollars for HIV/AIDS related services and that the majority of the programmatic funds are dependent upon Global Fund support (UNGASS, 2008). There is growing concern that this funding will be drastically cut in the future due to an upward shift in the per capita income in Belize. This increase in per capita income does not accurately depict the current economic situation in Belize; it merely reflects the growing wealth of the already economically empowered upper class, many of whom are not native Belizeans (Kari, 2002; Iyo, Mendoza, Cardona, Cansino, & David, 2003). With the increase in expenditures for HIV/AIDS related services, the challenge is to develop creative interventions that focus on the prevention of this disease.

Heterosexual transmission and prevention. One of the specific concerns of the National AIDS Commission in Belize is the prevention of the transmission of HIV during heterosexual contact (NAC Report, 2005). To address this concern, a number of initiatives have been identified including abstinence, safe sex, and the equalization of [sexual] relationship power between men and women (Garcia, 2000). Increasing condom

use for the reduction of HIV risk is a central component in the prevention of the transmission of HIV during heterosexual contact. As stated previously, nurses in Belize are in a unique position to reduce transmission of HIV during heterosexual contact by teaching their clients to use condoms. The need to address the issue of the promotion of condom use to reduce the risk of contracting HIV is underscored by the fact that only 26.1% of Belizeans aged 15-24 years can correctly identify ways of preventing the sexual transmission of HIV (UNGASS, 2008, p. 12).

The degree to which women are able to share in the decision to use condoms to reduce the risk of contracting HIV is critical in the prevention of this disease. Results of a U. S. study found that condom use during heterosexual contact increases when the decision to employ this method of safe sex is shared by both individuals as a result of the equalization of sexual relationship power (Soler, Quadagno, Sly, Riehman, Eberstein, & Harrison, 2000, Harvey, Bird, Galavotti, Duncan, & Greensberg, 2002). Ackermann and de Klerk (2002) conclude in their review of social factors in South Africa that a woman's lack of control over decisions or low sexual relationship power regarding safe sex practices, including condom use arises from her inability to express concerns in the relationship and share in the decision to engage in safe sexual practices.

To combat the rising HIV/AIDS rates in Belize the country has implemented a multi-sectoral response that stresses prevention, sexually transmitted infection (STI) treatment, ongoing public awareness campaign, HIV/AIDS counseling and health education. Behavior change communication strategies have been developed and implemented. However, activities in this area are limited to the Belize Family Life Association (BFLA) and the Ministry of Health (MOH). Recently BFLA has embarked

on an initiative, the Popular Opinion Leader program aimed at promoting behavior change among young people. While the Ministry of Health and the BFLA provide free condoms, distribution of condoms and promotion of condom use is primarily done through the commercial sector and the Pan American Social Marketing Organization (Belize Country Report, 2006).

While the current literature indicates existing programs in Belize are focusing on increasing the availability of condoms, little work has been done to investigate interpersonal and socio-cultural variables of health care providers that may impact their self-efficacy to teach condom use for HIV prevention. There have been no published studies that evaluate the public's trust of nurse's in Belize. However, data suggests that nursing in the United States is considered the most trusted of all professions (Gallup, 2006). A high level of public trust in nursing was also found in a study evaluating health care providers in The Netherlands, Germany, England, and Wales (van der Schee, Braun, Calnan, Schnee, and Groenewegen, 2007). Assuming that a similar level of trust may exist in Belize, Belizean nurses are in a unique position to play a vital role in the prevention of HIV through the promotion and teaching of condom use. Therefore, it is important to further understand variables that may impact their self-efficacy to teach condom use to women to reduce the risk of contracting HIV. Developing interventions based on a clearer understanding of the impact of these variables may assist nurses in Belize in their role as educators.

Purpose of the Study

The purpose of this study was to evaluate the relationship between selected variables and a nurses' self-efficacy to promote and teach condom use to women in Belize to reduce the risk of contracting HIV. These selected variables included the

nurses' positive vicarious experience observing other nurses or health care providers promoting and teaching condom use to women, interpersonal/socio-cultural variables and the nurses' sexual relationship power in their primary sexual relationship. The impact of positive vicarious experience promoting condom use on self-efficacy among nurses with lower sexual relationship power was also explored. This purpose was addressed through assessing the tenability of the following hypothesis and answering the following research questions.

- H₁ Belizean nurses' positive vicarious experience related to promoting and teaching condom use to women will be positively associated with greater self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV.
- RQ₁ What is the relationship between Belizean nurses' sexual relationship power in her primary sexual relationship, vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV, interpersonal and socio-cultural variables; and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?
- RQ₂ Among a subset of Belizean nurses with lower sexual relationship power, what is the relationship between her positive vicarious experience related to promoting and teaching condom use information to women and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?

Significance for Nursing

Capacity building or improving the clinical, administrative and patient education skills among healthcare professionals in Belize has been identified as a priority by the Ministry of Health (UNGASS, 2008, p. 27). Strengthening the skills and abilities of nurses, which includes improving self-efficacy to teach condom use to prevent HIV, may likely reduce the transmission of the disease. It is hoped that the results of this study will first begin to describe the cultural context in which condom use promotion takes place and be the foundation for the development of interventions with nurses in Belize that improve their self-efficacy to teach condom use to reduce the risk of contracting HIV among the women of their country.

Definition of Variables

Sexual relationship power. For the purposes of this study, sexual relationship power is defined as the nurse's score on the Relationship Control subscale of the Sexual Relationship Power Scale.

Lower sexual relationship power. Those individuals scoring in the lower 50th percentile on the Relationship Control subscale of the Sexual Relationship Power Scale in the sample (SRPS-RC) were considered to have lower sexual relationship power. The rationale for the selection of the lower 50th percentile is based upon pilot data that demonstrated a positive correlation between education and sexual relationship power. It was therefore hypothesized that because the sample in the proposed study will have at least the equivalent of LPN certification, the scores on the SRPS-RC may be negatively skewed. If a specific score was selected for a cut-point to represent those with lower sexual relationship power, there may be no individuals meeting the criteria.

Condom use to reduce risk of contracting HIV. Condom use in this study specifically pertains to its use for the reduction of HIV risk, not solely for contraception.

Self-efficacy to teach condom use to women to reduce the risk of contracting HIV. Self-efficacy to teach condom use to women to reduce the risk of contracting HIV is defined as how confident female Belizean nurses are when they are promoting and teaching condom use to their female patients to help them reduce the risk of contracting HIV.

Positive vicarious experience. Exposure to positive role models that confidently promote and teach condom use to women to reduce the risk for contracting HIV. This experience may override the possible negative influence that low sexual relationship power may have on a nurse's self-efficacy to promote and teach condom use to women to reduce the risk of HIV.

Primary sexual relationship. A primary sexual relationship is defined as the sexual relationship to which the woman determines she is the most committed and is defined by the individual responding to the survey. The participant was not asked to identify this individual on the survey, but to think only about this relationship when responding to the survey items. The study did not investigate sexual relationship power in other relationships, which are not considered primary.

Interpersonal and socio-cultural variables. These variables include income, education, marital status, cultural and religious affiliation, and experience as a nurse. This also included personal/professional experience with persons infected with HIV/AIDS.

CHAPTER II

Review of the Literature

HIV/AIDS has been identified as a public health issue that is particularly impacted by socio-economic, cultural and interpersonal influences. As early as 1999, government leaders in Belize recognized the need to investigate gender-related issues as a contributing variable. According to the National Strategic Plan developed by the National AIDS Commission (2000-2003), both men and women are vulnerable to the HIV epidemic. However, social constructs give men and women different positions and values, which determine different patterns of vulnerability. This review of literature first examines the cultural, historical, and social context of the HIV/AIDS issue in Belize. Prevention activities currently being implemented are then outlined. Self-efficacy and the influence of power, specifically sexual relationship power as well as gender specific issues that contribute to this epidemic are explored. Studies that investigate specific variables that contribute to provider self-efficacy are then reviewed. Finally, self-efficacy research in other disciplines is examined.

Cultural, Historical, and Social Context of Sexual Relationship Power and HIV/AIDS in Women in Belize

Like the general population, nurses in Belize come from a diverse cultural background and provide care to an equally diverse patient population. In a study evaluating condom use among women in Belize, six separate cultural groups (including

“other”) were identified in the small sample of 69 young women (Nash, 2008). The role of women in Belize has been formulated by a vast array of cultural and historical influences. These influences have directly and indirectly impacted the social context in which the decision to insist or even suggest condom use is made. It is important to have an appreciation of the diverse cultural composition of this country prior to conducting research on a topic, which is so heavily influenced by past and present social and cultural constructs.

While English is the official language of the country, Spanish, Creole, Garifuna, and Chinese, as well as a number of unwritten languages are spoken throughout the country. Some generalizations can be made about the past and current conditions in which the women (of all heritages) find themselves. Due to the heterogeneous cultural composition of the country, care must be taken when describing these variables from a cultural perspective. With the wide range of ethnic representation, it would be difficult to point to a specific cultural influence that directly impacts a women’s decision to insist on condom use.

Prior to 1991, Creoles dominated the population in Belize. Defining “Creole” can be difficult, but the term is most frequently used to describe persons of African, West Indian, and Afro-British traits. Creoles have historically dominated the population of Belize City, but can now be found throughout the country. Although Creoles and Garifuna share a common African heritage, the Garifuna are descendents from escaped slaves and Carib Indians. Both groups take great pride in their heritage, but for the outsider the similarities pose challenges and generalizations should be avoided. Individuals with a mixed heritage of European, Amerindian and Spanish are referred to

Mestizo (mixed) and are found throughout the country (McClaurin, 1996). Today, the Mestizo dominates the cultural fabric of Belize (History of Belize, 2007).

In the northern portion of Belize unique communities of Mennonites have been flourishing since their arrival in 1959 (History of Belize, 2007). Although isolated from most other cultural influences, they are a vital part of the economy through their trade of dairy products and woodcrafts. In the western portion of Belize remnants of the Mayan (Ketchi and Mopan) culture remain. Many of these groups use an oral language that has no written form. Some of the villages still exist in relative isolation and continue to practice cultural rites that have existed for thousands of years.

Irma McClaurin (1996) describes the struggle of the women of Belize in her book, *Women in Belize*. She profiles several women and offers a commentary on the social and economic plight of women in the country. McClaurin states that, “any attempt to neatly categorize people, towns, or political alliances in Belize immediately falls apart” (p. 2). This underscores the importance of considering the heterogeneous nature of the culture of Belize.

While cultural identification can influence the health status of any individual, for women, the gender role constraints and the socio-economic and political conditions found in Belize exert the most profound impact on the well-being of the women of this country. For most women in Belize this influence begins very early. “Young girls are inculcated early into their proper roles, and the significance of their contributions cannot be underestimated” (McClaurin, 1996, p. 63.). [Historically] In order for women to participate in the formal or informal economy, it is imperative to have the assistance of the female child to care for the siblings and perform household chores even at the

expense of her own education. Women's value in Belize comes primarily from their roles as wives and mothers. Their assigned role in society is reproduction and social reproduction and they are judged on how they fulfill these roles (McClaurin, 1996). With the movement into the urban areas this tradition has most likely began to subside.

In many cases, economic and societal conditions in Belize limit a woman's ability to independently support herself or her family; often times she is forced to tolerate living conditions that put herself and her children at risk. Her ability to insist on condoms to reduce her risk of HIV is one such example. To complicate this issue, a woman's self worth is predicated on her ability to reproduce (McClaurin, 1996). Condom use for the protection against HIV directly conflicts with this personal and socially dictated requirement further complicating this issue. In a country where common law unions are a norm and where infidelity on the part of the man is not only tolerated, but openly displayed, women are at even greater risk for contracting life threatening disease such as HIV. It is unclear how the self-efficacy of women who have greater economic independence such as nurses is impacted by these societal influences.

Sex roles and stereotyping have been outlined as priority issues for member nations of the United Nations Committee on the Elimination of Discrimination Against Women (CEDAW). Belize, as a member nation addressed the committee's concern regarding the committee's concern for discrimination against women (2005). Women primarily work in the home and have little political influence. Men typically work in the paid labor force; participate in government and politics, and are main decision-makers of the society. "Social structures perpetuate male domination over women" and "culturally, society has determined that men are the stronger and more dominant sex and women are

delicate, submissive and weaker “ (UN-CEDAW-Belize, 2005, p. 14). The continuing placement of women in a subservient role diminishes opportunities for active participation in decision-making. This lack of participation extends to the economy. Women become economically dependent on the male partner and become at-risk for HIV due to their need to remain with a partner who may not be faithful.

The ever-present threat of domestic violence has just recently been addressed as not only a public health issue in Belize, but also an issue with deep-seated cultural components that must be acknowledged. Like many Caribbean countries, Belize has reframed the issue of violence against women to a gender-based violence issue (National Report, Belize, 2006). In 2005, the National Gender Policy assigned the responsibility to the National Women’s Commission to ensure that efforts are implemented to address many of the challenges women face in the area of education, health, domestic violence, decision-making and wealth and employment opportunities (Regional Conference, 2005). Unfortunately, the very lack of power faced by women in Belize that is at the root of this issue has made it difficult for the Commission to be effective. Many of the members lack the necessary lobbying, advocacy and monitoring skills needed to effect change.

Economically, women in Belize continue to be disenfranchised. Women statistically account for only 34% of the active workforce. A figure that is difficult to interpret due to the high number of women working in the informal market. The 2005 report to the UN’s Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) outlines four main obstacles to women’s economic success; lack of alternatives to traditional employment, lack of organizational and leadership skills, difficulties addressing personal and interpersonal development and problems in the

development of effective marketing strategies for micro enterprises (UN-CEDAW-Belize 2005, p. 29).

The National Gender Policy was developed by the Government of Belize in 2002 to address these and other specific gender related issues following recommendations from the National Women's Commission. It outlines 215 commitments to women in the areas of social, economic and healthcare reform. The Sept 2005 UN-CEDAW report describes significant short-comings of this policy, specifically in the areas of domestic violence and issues related to healthcare and HIV/AIDS. Although there was a verbal commitment from the Ministry of Health, there was no equivalent financial support for implementation (UN-CEDAW-Belize 2005).

The same concerns have been expressed regarding the previous Department of Women's Affairs. The Department was established to coordinate national and local efforts to address concerns specific to women. According to a 1997 interview with International Women's Rights Action Watch, Lisa Shoman, head of the Belize Bar Association and activist stated, "This department can have only a limited impact because of serious underfunding (0.10% of the budget). The National Women's Commission, another government agency lacks any political clout" (International Womens' Rights Action Watch).

The relationship between education, poverty and health status has been clearly established internationally (von dem Knesebeck, Verde, & Dragano, 2006; Riley, Gandhi, Hare, Cohen, & Hwang, 2007; Karim, Tripura, Gani, & Chowdhury, 2006) and this relationship is no different in Belize. Education in Belize was originally developed through religious affiliations and has been based on the British system. In the 1950s and

1960s the model was revised to what it is today. Education is compulsory for ages 6-14 and is available at no cost; however, uniforms, transportation and other associated costs make it difficult and even impossible for some families. This is especially true for families in the most rural areas of the country.

A much less researched variable that may contribute to the HIV/AIDS problem in Belize is the potential influence of religion, especially as it pertains to condom use. Approximately 50% of Belizeans consider themselves to be Roman Catholic (Country Studies-Belize, 1992). Traditional beliefs regarding the use of contraception may directly impact the decision to use condoms for contraception as well as for protection against infections. When investigating condom use, it is important to identify why the individual is choosing to use the condom. Individuals use condoms for a variety of reasons including protection from sexual transmitted infections, for contraception, or both. The decision to use condoms for the prevention of HIV is a different process from the decision to use a condom for contraception. Although the outcome is the same; reduced risk of contracting infection and becoming pregnant, the decision process for the behavior is quite different. It is acknowledged that the inherent contraceptive properties of condoms may be prohibitive when a woman desires pregnancy, but wishes to protect herself from HIV.

The influence of religion is also exerted via funding mechanisms that are predicated on the use of specific abstinence messages. A variety of agencies have used the (US) President's Emergency Plan for AIDS Relief (PEPFAR) as a guide for the allocation of funds and for programmatic development. PEPFAR's strategy employs the "ABC's" of prevention; abstinence until married, be faithful and condom use for high

risk groups. This is especially troublesome when the program mandates that 33% of funding must go to abstinence only messages (Institute of Medicine, 2007). This philosophy is shortsighted, founded in religious doctrine and unrealistic for most of the world's women (Maharaj & Cleland, 2005; Clark, Bruce, & Dude, 2006).

The influence of religion may also play a role in the development of self-efficacy in nurses to provide condom use information to women to reduce the risk of HIV. Many schools in Belize operate under the Church-state system, with much of the funding coming as direct payment or by the provision of teachers, schools and supplies. This is especially true for primary and secondary institutions. Many of these schools are Roman Catholic, estimated at around 50% (Country Studies-Belize, 1992). Nurses educated by this system may have deeply imbedded ideas surrounding condom use not only for disease prevention, but also for contraception. This may influence their self-efficacy to promote and teach condom use for any reason.

These same schools provide no alternatives for young women who become pregnant while in school. The student must withdraw from school and cannot re-enroll after the child is born. This has become extremely problematic for the women of Belize as evidenced by the teen-age pregnancy rate, which is one of the highest in Central America with one in five births being to adolescent mothers and 70 percent to single mothers. Abortion is illegal in Belize although available by lay practitioners (UNCEDAW-Belize, 2005). These policies that contribute to the well-documented cycle of poverty result in continued power differentials and place women at risk for disease including HIV. Being residents of Belize, nurses educated, living and practicing in Belize would also be subjected to these same influences.

Where there is lack of education, poverty typically follows. Where there is poverty so goes a decline in health status (Savitz, Kaufman, Dole, Siega-Riz, Thorp, & Kaczor, 2004; Cooper, McCausland, & Theodossiou, 2006). In Belize, the unemployment rate for women is twice that of men, 15.3% vs. 7.5% (UN-CEDAW-Belize, 2005). Many of those women who are unemployed (53.8%) are supported by their spouse indicating a high level of female economic dependence. Although the leading cause of death for women in Belize is diabetes related complications, causes for hospitalization shed light on the need to focus more effort in directed care for women's issues (see Table 1).

Table 1. Ten Leading Causes of Hospitalization for Females 1997-2007

1. Complications of pregnancy, childbirth and the puerperium
2. Injury, poisoning and certain other consequences of external causes
3. Acute respiratory infections
4. Intestinal infectious disease
5. Bronchitis, chronic and unspecified, emphysema, asthma
6. Disease of the urinary system
7. Diseases of other parts of the digestive system
8. Appendicitis, hernia of abdominal cavity and intestinal obstruction
9. Other conditions originating in the perinatal period
10. Diabetes mellitus
11. Deficiencies and anaemias (UN-CEDAW-Belize, 2005)

With “injury, poisoning and certain other consequences of external cause” being second on the list, it is unclear what contribution gender-based violence may have made to these statistics.

An issue of particular concern is the stigma placed on condom use, particularly for the prevention of disease transmission. Although no similar study has been conducted in Belize, the presence of a Garifuna population in Belize, make it possible that studies of other Garifuna communities may aid in the understanding of stigma in this group. A

quote from a participant in a qualitative study of the Garifuna people of Honduras (Stansbury & Sierra, 2004) demonstrates this concern:

The men are negative. They don't like going out with a condom. They don't want to educate themselves. Women educate themselves because it's the woman who pays when she accepts a man just like that. She gets an examination and all that. But the men...no. When he gets with a woman...boom...just like that. And when she shows him a condom the first thing he says is that all the women, all of them are prostitutes because he doesn't understand it's to take care of both of them (p. 465).

An added socio-cultural variable that is of growing concern is the increase in international trade in Belize by cross-border trucking. Products from neighboring Guatemala and Mexico are transported to Belize on established routes throughout the country. The trucking industry is a well-known participant in the commercial sex-worker (CSW) industry (Gibney, Saquib, & Metzger, 2003; Morris, Morris, & Ferguson, 2009). Women in a marital or cohabitating relationship with a man in this industry are at a higher risk for contracting sexually transmitted HIV/AIDS, but may have little power to insist on protection.

Limited research has been conducted in Belize evaluating HIV/AIDS risk perception and condom use among women. One such study conducted with women in Belize by Nash (unpublished data) found that in a sample of 67 sexually active women, 47.1% considered themselves at some risk for HIV/AIDS yet only 26.2% consistently used condoms. Further research is needed in this area to more clearly understand how

socio-cultural influences impact the decision to use condoms to protect against HIV/AIDS.

HIV/AIDS Prevention Initiatives with Women in Belize

Prevention activities, including the promotion and teaching of condom use are central to any initiative developed to stem the spread of HIV/AIDS. The National AIDS Commission (NAC) in the development of their original 2000-2003 Strategic Plan has identified this need. Although no local [Belizean] studies exist that identify specifically how gender roles and existing gender inequalities are influencing the AIDS epidemic, it is generally perceived as an important factor (NAC, 1999). Research for this situational analysis has identified the need for local studies on the relationship of the HIV/AIDS epidemic on issues such as poverty, migration, drug use and gender. Comprehensive services such, as medical and social, which are available and accessible, need to be improved and guidelines established for HIV/AIDS (NAC, 1999).

The NAC updated the strategic plan for 2006-2011. Although a more organized and comprehensive outline, a specific commitment to issues directly impacting women is absent. Priority areas highlight “at risk” groups as men who have sex with men (MSM), commercial sex workers (CSW), the prison population and uniformed service (p. 39). The absence of women as an identified “at risk” group underscores the need for a focused, coordinated approach from a gender-role perspective to address the needs of women faced with increased HIV/AIDS risk. There is also no specific outline addressing the role of nurses in this plan. The identification of barriers among nurses to the promotion and teaching of condom use may aid in the development of targeted interventions.

Self-efficacy

Bandura's Self-efficacy Theory served as the conceptual framework to evaluate variables that may be associated with nurse's self-efficacy to promote and teach condom use to women in Belize to reduce the risk of contracting HIV. Self-efficacy is an individual's perceived ability to perform a specific behavior (Bandura, 1997). In this study, the specific behavior is promoting and teaching women about the use of condoms specifically to reduce their risk of acquiring HIV. Bandura has identified four main influences of self-efficacy: Mastery activities, vicarious experiences, verbal/social persuasion and physiological input such as stress reaction. Mastery activities and vicarious experiences have been identified as the most powerful influences on self-efficacy (Bandura, 1997). The theory suggests that the infrequent promotion and teaching of condom use may be rooted in the interpersonal characteristics of the nurse including their formal training, prior work experience including the task of interest (mastery activities) or access to and utilization of mentoring/modeling (vicarious experiences).

Self-efficacy, sexual relationship power, and condom use. According to Bandura (1986), an individual's behavior is determined through the continuous interaction among cognitive, behavioral, and environmental factors. A nurse's perceived sexual relationship power in her own primary sexual relationship may be considered a cognitive factor that could influence her self-efficacy to teach condom use. A woman's perception of her sexual relationship power (or her perceived level of control) in her sexual relationships has been shown to both directly and indirectly influence her ability to consistently use condoms. A study conducted in South Africa with sexual active females

aged 15-24 years old (N = 4,066) found that individuals with low sexual relationship power were 2.1 times more likely to inconsistently use condoms (Pettifor, Measham, Rees & Padian, 2004). Results from a 2002 study conducted with 388 primarily Latinas in the U. S. found that 52 % of the lack of consistent condom use among women could be attributed to low sexual relationship power (Pulerwitz, Amaro, De Jong, Gortmaker & Rudd, 2002). An additional U. S. study with Caucasian and African American college students (N = 615) using Bandura's self-efficacy theory explored the relationship between sexual relationship power, ethnicity and self-efficacy. This study found that women who reported a dominant partner had a lower self-efficacy for discussing safer sex and refusing sex. This relationship did not differ based on race (Soet, Dudley & Dilorio, 1999).

With inconsistent condom use, the risk for acquiring HIV increases dramatically. Dunkle, Jewkes, Brown, McIntyre, & Harlow (2004) in their South African study with women attending antenatal clinics (N = 1,366) found that high levels of male partner control in the relationship as measured by the Sexual Relationship Power Scale (SRPS) was associated with HIV seropositivity with an odds ratio of 1.55 [95% CI 1.13-2.04]. With support from the current literature, it was hypothesized that a nurse's perceived sexual relationship power in her own primary sexual relationship may be an important cognitive variable that influences her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV.

Current literature describing self-efficacy among health care workers to promote and teach condom use is limited. When adding "condom use specifically to reduce HIV risk" no studies could be found. Due to the limited research in this specific area,

literature that evaluates provider self-efficacy in other topical areas is presented to further support the need for this study.

Provider self-efficacy to provide prevention messages. In a US study, Tao, Irwin, and Kassler (2000) examined whether physicians assessed their patients for STDs or counseled them about STD prevention and found only one-quarter of the 3390 people in the study had received this service. Findings from several studies provided additional support to the above findings such as (Risen, 1995; Wechsler, Levine, & Idelson, 1996). These researchers found that providers often feel inadequate when attempting to obtain sensitive information such as sexual histories. This is especially true when asking questions about high-risk sexual behavior.

Ozer, Adams, Gardner, Mailloux, Wibbelsman, and Irwin investigated provider self-efficacy in a 2004 U. S. study. The purpose of this study was to examine the extent to which providers' (medical doctors and nurse practitioners, N = 66) perceived self-efficacy to deliver adolescent preventative services relates to their screening practices. The authors hypothesized that provider self-efficacy to provide screening services to adolescents would be significantly related to their self-report of screening practices. An interesting second hypothesis was that self-efficacy would also be related to the independent report from the adolescents that these screenings were in fact provided (Ozer, et al., 2004). The instrument used to measure the concept of provider self-efficacy to deliver preventative services to adolescents was developed using Social Cognitive Theory, specifically self-efficacy as a framework (Bandura, 1997). Topical areas that were evaluated included: tobacco use; alcohol use; sexual behavior; seat belt use; and helmet use. Because a modification of this subscale is used in this study, it is included in

the appendices (Appendix A). These behaviors were selected based on their association with adolescent morbidity and mortality. The instrument was developed incorporating the suggestions by Bandura (1997) to design response options that measure the strength and magnitude of the variables. For each topical section items were arranged from simple to more difficult and response choices were on a Likert-type scale from 0-not at all confident to 10-extremely confident. The study found positive correlations between provider self-efficacy and adolescent report of screening in two of the five content areas: $r = .25$ ($p < .05$) for both sexual behavior and tobacco use. Alcohol use was positively correlated at $r = .23$, but failed to attain statistical significance ($p < .06$). Seat belt use and helmet use were not significantly correlated. The authors conclude that increasing self-efficacy in this area could be an important step in increasing preventative screening with adolescents. The Modified Sexual Behavior Efficacy Subscale (with women)-Provider's Attitude Questionnaire (MSBES(w)-PAQ) that was used in the current study was developed from the results of this study (Appendix B).

Research focusing on the self-efficacy of health care providers spans a variety of domains. Providing smoking cessation counseling is the focus of the U. S. study by Barta and Stacy (2005). A pre-post design was used to measure the differences in self-efficacy to provide smoking cessation information and counseling to patients. Fifteen nurses of varying levels of education participated in a two-hour session on the "5 A's" (ask, advise, assess, assist, and arrange). This session comprised the intervention. The evaluation tool was designed using Bandura's self-efficacy theory as the framework. The Modified "5 A's" Program Survey contains 14 items on a 5-point Likert-type scale and measures both self-efficacy and behavior. Results from this study did indicate that this brief

intervention provided for some improvement in self-efficacy. The specific variables “ask if smokes”, “assist to set quit date”, and “encourage social support”, revealed no significant difference in mean scores. The authors suggest that nurses may have already had high self-efficacy for those particularly tasks/questions and the questions may have been at a low-magnitude.

In a mixed-method study Tresolini and Stritter (1994) explored how learning experiences contributed to medical student’s self-efficacy to conduct patient education and health promotion. This U. S. study conducted with medical students (N = 28) provided foundational work for continued curriculum redesign in health sciences education (Donoghue, 2000; Sierpina, Kreitzer, & Stanley, 2006; Laschinger, 1996). This study was guided by Bandura’s (1986) self-efficacy theory and sought out to explore medical students’ experiences with patient education for health promotion. The study also investigated the level of confidence medical students had in their ability to provide health promotion education to their patients. Specific areas of interest included smoking cessation, nutrition for cardiovascular health and exercise. Semi-structured interviews were conducted and participants (medical students) were asked to complete the Self-Confidence in Patient Education for Health Promotion (SPEHP) questionnaire. Interviews were also conducted with faculty members in the medical school. Results from this study identified vicarious sources of self-efficacy to be powerful in the effect on learning. Those students directly involved in delivering prevention information to patients, especially in student-run community clinics found performance-related self-efficacy to be higher. Persuatory self-efficacy was found to be more indirect—not “you *can* do this,” but rather “you *need* to do this,” (Tresolini & Stritter, 1994). The findings

would suggest that the student may have had to make the connection, consciously or subconsciously between being told that they were able to do the specific task not just that it was necessary to do so. The authors conclude that students having more comprehensive and integrated sources of self-efficacy information would logically be more willing to participate in the delivery of preventative services. This study, although conducted with medical students demonstrates that actually performing a task/behavior can translate into improved self-efficacy and willingness to perform the same behavior in the future. This study would support the need to evaluate the relationship between experience with HIV prevention activities in the nursing role and self-efficacy to provide condom use information to women to reduce the risk of HIV.

A study of undergraduate nursing students' health promotion counseling self-efficacy by Laschinger (1996) used the SPEHP, the same instrument used in the study by Tresolini and Stritter (1994). The instrument was used to evaluate differences in self-efficacy by students' year in the baccalaureate program. Bandura's (1977, 1986) self-efficacy theory provided the basis for this study. A convenience sample of undergraduate baccalaureate nursing students in a Canadian university (N = 114) agreed to participate in the study. A significant difference in health promotion counseling self-efficacy was seen between the first and fourth year students. Of interest, self-efficacy dropped off slightly from the first to the second year. It was hypothesized by the authors to be a reflection of the time spent in the second year in acute care where preventative messages may not be practiced as often; again supporting the portion of Bandura's theory (1977, 1986) that performance of specific task improves an individual's self-efficacy for that task.

Although conducted in the United States, a study that more closely investigated variables that contribute to whether a health care provider would provide HIV-related preventative services surveyed nurses and physicians (N = 534) from the mid-west (Wolf, Linsk, Mitchell, & Schectman, 2004). One third of the nurses and 26.8 percent of the physicians reported that they did not engage in any HIV-related public health role in their practice. Physicians with prior HIV continuing medical education and training were 3.1 times more likely to report HIV-related public health services in their practice than providers without prior training ($p = .004$). Nurses with prior experience serving HIV-infected patients were two times more likely (2.04, 95% CI) to identify a public health role for HIV-related services. Although the authors do not specifically identify Bandura's self-efficacy theory as a framework for the study, two of the most statistically and clinically significant independent variables (experience and training) do fit nicely into the theoretical underpinnings. While this study does not evaluate services specifically for women, it is somewhat unique in that it includes nurses as providers, which were the participants in the current study.

Self-efficacy research in other disciplines. Self-efficacy theory has been used to frame a variety of studies across a multitude of disciplines. Psychological counseling provides yet another example where this theory has been used. Results from a study by Tang, Addison, LaSure-Bryant, Norman, O'Connell, and Sicking (2002) revealed that length of internship hours and prior work experiences were both positively correlated to counseling self-efficacy. Participants from the Midwestern United States enrolled in master's degree counseling programs (N = 116) completed the study. Demographic information and programmatic information was obtained. Participants were asked to

complete the Self-Efficacy Inventory (S-EI) developed by Friedlander & Snyder (1983). This instrument asks participants to rate their self-efficacy to perform tasks across a variety of domains. A 10 pt. Likert-type scale was used for the study. Results from this study also demonstrated that when demographic variables were controlled for, training hours and prior work experience remained positively correlated to higher perceived counseling self-efficacy. These results provide empirical evidence for Bandura's (1986) theory of self-efficacy, which states that past experience (including vicarious experience) and actual involvement in an activity allow individuals to increase their confidence (self-efficacy) that they can in fact successfully complete the desired task (Tang, et al., 2004).

Academicians across a variety of disciplines have used Bandura's self-efficacy theory not only as a basis for educational research, but also as an aid in programmatic development and evaluation. The purpose of an article by Pajares (1996) was to review what contributions the self-efficacy component of Bandura's (1986) social cognitive theory has made to motivation in academic settings. Among the many important issues Pajares (1996) highlights in this extensive review is the problem of causality. "Is feeling good about oneself primarily responsible for increased achievement or is successful performance largely responsible for stronger feelings of self-worth?" Pajares identifies the nature of self-efficacy theory as an ideal vehicle to explore the differences in perceptions as a function of factors such as age, race and ethnicity. The author also points to the need to explore development aspects that contribute to the formation of personal self-efficacy across a variety of domains (Pajares, 1996). This review provides a comprehensive exploration of self-efficacy in education where Bandura conducted much of his seminal work.

In summary, research supports that many women in Belize can be socially and politically disenfranchised. This can start at a young age with the relegation to domestic roles. As a result of this, and economic dependency, risk for HIV/AIDS is increased.

After an exhaustive search of the literature using the MEDLINE database from 1950 to present and the entire PsychINFO database, no studies exploring variables influencing health care providers' self-efficacy to promote and teach condom to women to reduce the risk of HIV could be found. The preceding review demonstrates the abundance of foundation work in a variety of other disciplines across many topical areas and supports the basis for the current study.

As previously stated, the government of Belize has identified prevention as an important strategy to reduce the burden of HIV in the country. A focus on identifying and exploring variables that may impact the self-efficacy of nurses to promote and teach condom use to the women of the country is a first step in designing interventions to improve the self-efficacy of Belizean nurses. It is hoped that this may, in turn lead to increased rates of condom use and decreased rates of HIV in Belize where the prevalence rate of HIV is the highest in Central America.

CHAPTER III

Methodology

Purpose

The purpose of this study is to evaluate the relationship between selected variables and a nurse's self-efficacy to teach condom use to women in Belize to reduce the risk of contracting HIV. These selected variables include the nurses' positive vicarious experience observing other nurses or health care providers promoting and teaching condom use to women and the nurses' sexual relationship power in their primary sexual relationship. The impact of sexual relationship power on self-efficacy was also examined in this study. Although there was no established theoretical linkage between these variables, it was hypothesized that sexual relationship power may be a component of social and verbal persuasion identified in Bandura's self-efficacy theory. The influence of positive vicarious experience on nurses with low sexual relationship power may also guide in the development of targeted interventions.

Design

This descriptive, correlational study utilized a survey methodology. The study employed a cross-sectional design with convenience sampling.

Sample

Data were analyzed from a final sample of 60 female nurses practicing (working as nurses) in Belize. Inclusion criteria were as follows: Female, nurse (RN, LPN),

currently practicing or volunteering in an area that cares for female, sexually active patients/clients above the age of ten. This lower age cut-off was determined after discussions with Joanne Burke, Director of the Belize Family Life Association (personal communication, March 12, 2007). It has been reported that girls as young as 10 have been seen in their facilities for STD and pregnancy. The subject must also be currently in a heterosexual, sexually active relationship.

A sample ($N = 78$) was recruited for this study. A minimum of 75 subjects was needed based in part on results from pilot work conducted among women in Belize in 2007 (Nash, 2008), which demonstrated that analysis could be completed with 75% of the returned questionnaires. Remaining conservative, it was anticipated that 70% of the questionnaires returned from the proposed sample would be complete and satisfactory for data analysis. An a priori power analysis was conducted to determine the appropriate sample-size. Due to uncontrollable variation inherent in social and behavioral research, a conservative effect size of .3 is anticipated for the purpose of estimating the necessary sample size in order to preserve statistical power (Cohen, 1977). Over-sampling by 30 % was needed, requiring data collection from a minimum of 75 subjects. Using five to-10 subjects enrolled per variable entered into the statistical model, the final sample of 52 subjects will accommodate between 5 and 10 covariates. A minimum correlation of $r = .273$ ($n = 52$, $df = 51$) was necessary to achieve statistical significance.

Setting

Data were collected November 27, 2009 at the Annual Nurses' Conference hosted by the Nurses' Association of Belize. The conference was held at the Radisson Fort George Hotel in Belize City, Belize. Space was made available for the Principal

Investigator to receive the completed data collection packets and to answer questions from participants.

Instrumentation

There were three instruments used in this study. The study participants were asked to complete the Relationship Control sub-scale of the Sexual Relationship Power Scale (SRPS-RC), and the Modified Sexual Behavior Subscale (with women) of the Providers Attitudes Questionnaire (MSBES(w)-PAQ). The participants were asked about their positive vicarious experience pertaining to condom use promotion and teaching to women by responding to the newly developed Vicarious Experience Condom Use Promotion with Women (VE-CUP(w)). Interpersonal and socio-cultural variables such as age, marital status, education level, personal experience with people with HIV/AIDS, and practice activities were used to explore a nurse's self-efficacy to teach condom use to women to reduce their risk of contracting HIV/AIDS. Data from the open-ended question, "What do you think is the most influential reason why you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS?" was collected and used to triangulate the data.

The Relationship Control subscale of the SRPS-RC. The SRPS-RC (Appendix C) was used to measure the independent variable of sexual relationship power in the primary sexual relationship. The Sexual Relationship Power Scale (SRPS) (Pulerwitz, et al., 2000) was developed to measure a woman's ability to participate in the decision of engaging in safe sex practices. Research suggests that gender-based imbalances influence this ability (Pulerwitz, et al., 2002). This paper and pencil instrument consists of twelve items addressing the relationship control component of sexual relationship power.

Responses are measured on a 4-point Likert-type scale (strongly agree to strongly disagree). The range of possible scores is from 12 to 48. Higher scores correlate with greater control (power) in the sexual relationship. This subscale was selected after psychometric assessment was completed on this instrument using data from a pilot study (Nash, 2008). The purpose of this pilot study was to evaluate risk perception and variables contributing to condom use among Belizean women. This study, conducted in Belize in 2007 had a final sample size of $N = 66$ women from 18-37 years old. Data was collected from two sites; the University of Belize in Belmopan, Belize and in Gales Point, Belize. This study included the Sexual Relationship Power Scale, which consists of two separate subscales; Relationship Control (RC) and Decision-Making Dominance (DMD).

Internal consistency was evaluated on both subscales. The RC scale yielded a Cronbach's alpha of .90. The DMD scale yielded a Cronbach's alpha of .51 indicating less than desirable reliability. To evaluate the validity of this instrument it was hypothesized that years of education would be positively correlated with the subscale scores of the SRPS. Results demonstrated that years of education were positively correlated with the RC scale ($r = .402, p = .00$) and with the DMD scale ($r = .329, p = .007$; Nash, 2008). Since the RC scale has demonstrated reliability among Belizean women, only the RC subscale was used for the current study.

Modified Sexual Behavior Efficacy subscale (with women) of the Providers Attitude Questionnaire (MSBES(w)-PAQ. The dependent variable of self-efficacy to promote and teach women about condom use to reduce their risk of contracting HIV was measured by a modification of the Sexual Behavior Efficacy subscale of the Providers Attitudes Questionnaire (Appendix A; Ozer, et al., 2004). This scale was developed to

examine provider's self-efficacy to deliver preventative services to adolescents. Development of the original scale was done to provide an instrument to measure providers' self-efficacy to delivery a range of preventative services to adolescents. This instrument measures self-efficacy to speak to teens regarding sexual behavior, tobacco use, alcohol and drug use, as well as helmet and seat belt use. The seven-item sexual behavior efficacy subscale demonstrated excellent reliability (Cronbach's alpha .95) in the original study. Since no instrument is currently available to operationalize the variable of self-efficacy to provide condom use information to women to reduce HIV risk, questions from the sexual behavior portion of the Sexual Behavior Efficacy subscale of the Providers Attitudes Questionnaire have been modified for the current sample of women above age 18 (See Appendix A). The modified scale contains six items on a 10-point Likert-type scale (Appendix B). This scale contains six items that asks the participant about their level of confidence in speaking with women about condom use to prevent the spread of HIV? Response choices are from 1-10 (not confident at all to extremely confident). The range of possible scores is from 6 to 60. Questions 1-4 of the modified scale are essentially the same as the original scale with the exception of changing "teens" to "women". Question 3 on the original scale was omitted because it asked about individuals who were not sexually active. The Principle Investigator, in order to capture the nurses' full range of self-efficacy, which would include the ability to respond to questions, not just deliver content, added questions 5 and 6. It is acknowledged that many differences exist between adolescents and adult women and that reliability and validity with this modified instrument will need to be established. This modified scale was evaluated for face validity by a panel of three Belizean nurses prior to

implementation and found to demonstrate good face validity. Internal consistency using Cronbach's alpha was evaluated using data collected during the current study, and will be discussed in the results section.

Vicarious Experience-Condom Use Promotion (with women); (VE-CUP(w)).

The variable of positive vicarious experience was measured by asking the participants a series of self-evaluative questions regarding their vicarious experience with condom use promotion and teaching (Appendix D). These questions were created by the investigator based on principles developed by Bandura (1986). To further explicate this variable, the specific types of vicarious experience were explored. Vockell has delineated vicarious experience in his on-line book based on the work of Gagne and Driscoll (1988). These specific types include: Modeling effect, eliciting effect, disinhibitory effect, and inhibitory effect.

Modeling effect exerts influence by allowing the individual to model the *exact* behavior demonstrated by model. This type of vicarious experience was measured by asking the participant about their experience observing a nurse or other health care provider speaking to women about condom use for the specific reason of HIV prevention.

Eliciting effect differs from modeling effect in that the behavior is *similar* to the previously observed behavior. This type of vicarious experience was measured by asking the participant about observing a nurse or other health care provider speak to women about condom use for any purpose (i.e. contraception, STD prevention, etc).

Disinhibitory effect occurs when an individual observes a behavior and *does not* observe any negative consequences from the behavior and therefore tries the behavior themselves. This type of vicarious experience was measured by asking the participant if

after observing a nurse or other health care provider speak to women about condom use for HIV prevention and *not* experiencing any negative consequences (i.e. women or partner gets upset, getting asked a question you don't feel you can respond to adequately) she would be willing to try this task yourself.

Finally, inhibitory effect stems from the observation of a behavior that elicits a negative response and inhibits the individual from wanting to attempt a particular activity. Because the current study is focusing on positive vicarious influencers, this particular effect was not measured in the current study.

Participants were asked to respond to five items on a 5-point Likert-type scale with response choices ranging from never to very often. The responses to the five items were summed to obtain a score. Individual scores can range from five to 25, with a score of five representing the minimum amount of positive vicarious experience and 25 representing the maximum. The design of the scale and specifically the response choices was based on a review of the literature that recommends that when creating a Likert-type scale, a minimum of five response options is ideal (Uebersax, 2006). Arranging the choices in ascending numerical order and associating them with a verbal label is also a defining characteristic of this type of scale. The resulting instrument was named the Vicarious Experience Condom Use Promotion (with women) scale (VE-CUP(w)).

Based on recommendations from Morse and Field (1995), six lines were provided for participants to respond to the open-ended question, "What do you think is the most influential reason why you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS?" "Respondents tend to write in two-thirds the required space" (p. 105). With this in mind, six lines were chosen to allow adequate

response without intimidating the participant. Anticipated responses such as, "I don't have time", "It won't help anyway", "I don't think of it", or "I am not comfortable talking about it" would be accommodated in the allotted space with room for elaboration. A major disadvantage to this method of questioning is the need for the participants to be literate and comfortable expressing themselves in writing (p. 105). This was not foreseen to be an issue with the current sample of nurses.

Socio-demographic data and HIV education and experience. Additional data collected in this study included interpersonal information about the subject's personal experience with individuals who have been diagnosed HIV/AIDS. Socio-demographic data and information regarding education, employment, and religious affiliation was collected using the data collection instrument found in Appendix E. English is the official language of Belize and therefore all data collection instruments were administered in English.

Three practicing nurses in Belize evaluated the entire data collection instrument for face validity. This was facilitated by Lydia Alpuche-Blake, President of the Nurses' Association of Belize and found to demonstrate adequate face validity.

Procedure

Human studies protection. Approval by the University of Louisville IRB was obtained prior to the initiation of this study. Neither the country of Belize nor the University of Belize has an IRB. The mechanism for study approval was via the Ministry of Health. A letter of support from the Nurses' Association of Belize (Appendix F) and the Ministry of Health in Belize (Appendix G) accompanied the IRB submission. A copy

of the IRB approval letter from the University of Louisville was forwarded to the Belize Ministry of Health in Belmopan, Belize.

Data collection forms did not request any information that could be used as identifiers. Return addresses were not requested. Data collected by Principal Investigator is stored in password-protected files and kept in secured file cabinets' at the University of Louisville School of Nursing. All staff working on the study has obtained/maintained appropriate and required certification as mandated by the University of Louisville (CITI).

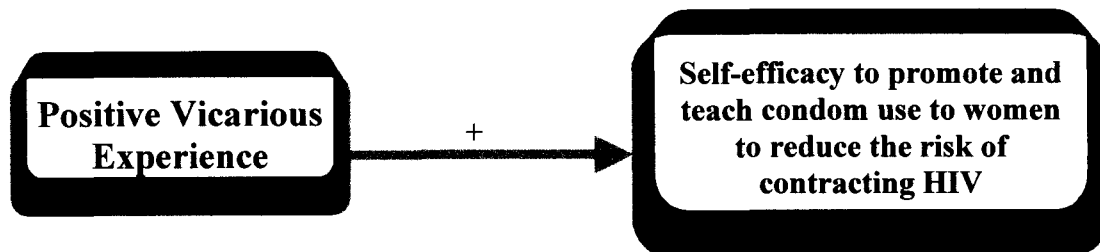
Data collection. Prior to leaving for Belize, the investigator assembled the study materials in individual, brightly colored envelopes. These envelopes included the preamble that waived documentation of written informed consent (Appendix H), the data collection forms, and directions as to where to return the completed or incomplete packages. Completion of the anonymous questionnaire implied consent. The study packets were placed in with the conference materials. The investigator was stationed at a booth at the annual Belize Nurses' Conference. This conference was held at the Radisson Fort George Hotel in Belize City. At the beginning of conference the President of the Nurses' Association of Belize (NAB) announced the opportunity for participation in the study and that the study materials were included with the conference materials. Participants were instructed to turn in their completed or incomplete study materials at the booth by the end of the conference. Participants were offered either a discount coupon for \$10.00 BZD (\$5.00 USD) off of the following year's conference which is typically around \$40.00 BZD, or a gift bag with items such as pens and note pads.

Data Analysis

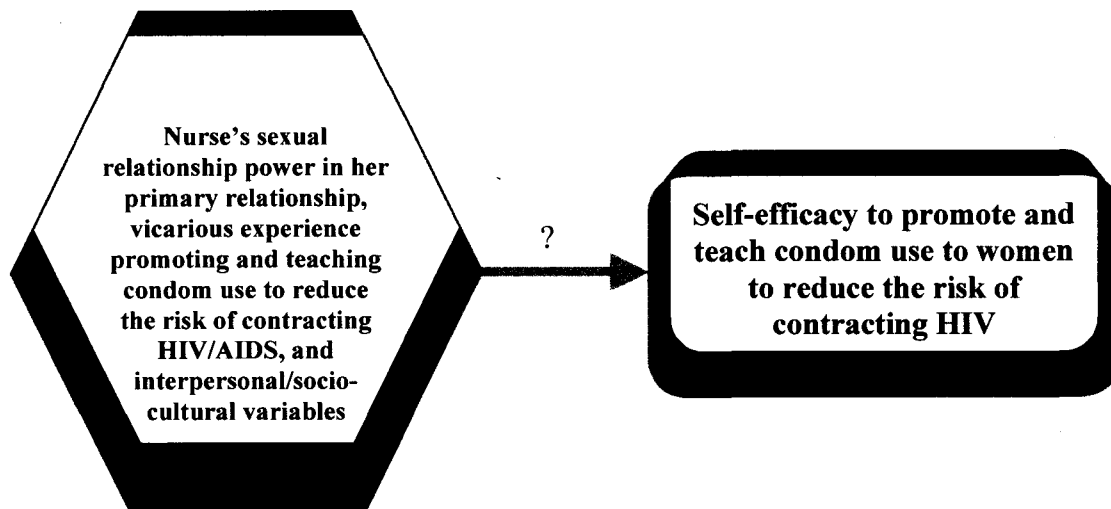
The figure below (Figure 3) served as a visual guide to direct the data analysis for this research study.

Figure 3

Hypothesis # 1

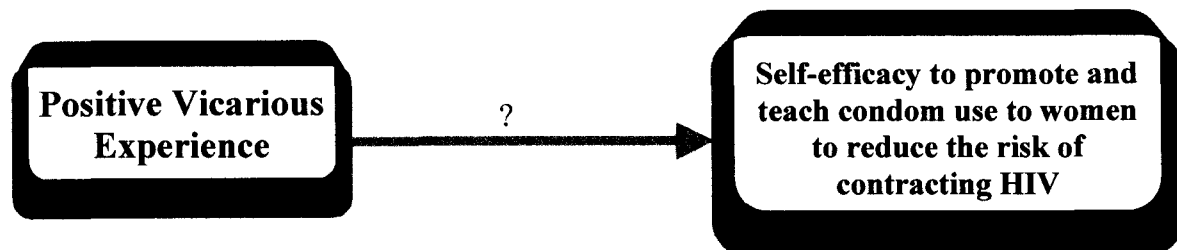


Research Question # 1



Research Question # 2

[Among nurses with lower sexual relationship power]



It is important to note that although Bandura's theory identifies four areas that contribute to the development of self-efficacy, for the purposes of this study the Principle Investigator focused on positive vicarious experience as an established variable of interest. The rationale for this decision was rooted in the desire to formulate future interventions to improve the self-efficacy of nurses to promote and teach condom use to women to reduce HIV risk. Providing opportunities for vicarious experiences may be the most logical point of interventions.

Quantitative analytical procedures. Data was cleaned, prepped, and coded.

Data was then entered into a Microsoft Excel spreadsheet. This file was then downloaded to the Predictive Analytic Software (PASW) 18. Missing variables were addressed as outlined below. Subject's scores on each of the scales were calculated.

Statistical analyses were conducted using the SPSS. This is outlined in Table 2.

Table 2. Plan for Quantitative Statistical Analyses

Research Question/ Hypothesis	Sample	Independent Variable	Dependent Variable	Statistical Test
Hypothesis 1	Entire Sample	Positive Vicarious Experience (VE-CUP(w))	Self-efficacy MSBES(w)-PAQ	Pearson <i>r</i>
Research Question 1	Entire Sample	Sexual Relationship Power (SRPS-RC), Positive Vicarious Experience (VE-CUP(w)) Interpersonal/Socio-cultural variables	Self-efficacy MSBES(w)-PAQ	Pearson <i>r</i> , Multiple Regression
Research Question 2	Lower 50 th Percentile SRPS-RC	Positive Vicarious Experience (VE-CUP(w))	Self-efficacy MSBES(w)-PAQ	Pearson <i>r</i>

Descriptive statistics including frequencies, distributions, normality, variance and skew were conducted with the demographic data of the sample. Individuals whose scores on the SRPS-RC fell into the lower 50th percentile were selected. This represented the sub-sample of subjects with lower sexual relationship power.

Prior to further analysis, psychometric evaluation was conducted on the Modified Sexual Behavior Efficacy Subscale (with women) of the Providers Attitudes Questionnaire (MSBES(w)-PAQ), the Relationship Control Subscale of the Sexual Relationship Power Scale (SRPS-RC), and the Vicarious Experience-Condom Use Promotion scale with women (VE-CUP(w)). The internal consistency of these scales was assessed by using Cronbach's alpha. Factor analysis was also conducted on each of these scales to aid in the evaluation of the construct validity of these instruments.

Correlational statistics were used to test the hypothesis, "Belizean nurses' positive vicarious experience related to promoting and teaching condom use to women will be positively associated with greater self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV. Pearson r correlation statistic was used to test the strength and direction of the relationship between participants' scores on the items related to vicarious experience (VE-CUP(w)) and the MSBES(w)-PAQ (Table 2).

Correlational statistics were also used to evaluate the research question, "What is the relationship between Belizean nurses' sexual relationship power in her primary sexual relationship, vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV, interpersonal and socio-cultural variables; and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?" Pearson r correlation statistic was used to test the strength and direction of the

relationship between participants' score on the SRPS-RC, interpersonal and socio-cultural variables and the MSBES(w)-PAQ. Based on these results, a correlation matrix was constructed. Correlational analyses were then performed to determine strength and direction of relationships between the individual independent variables and the dependent variable. For variables that were highly correlated, a regression model was developed to predict the outcome variable of self-efficacy to promote and teach condom use to women to reduce the risk of HIV. Due to the sample size of 60, the model would accommodate only the six most significantly correlated variables.

Missing data. According to Knapp (1998), the reason for missing data can be categorized into four primary areas; unintentional lack of cooperation, refusal to provide certain information, malicious intent, and clerical problems with data collection. The best method to address this issue is to put in place procedures to prevent it from happening in the first place. Providing clear instructions for the participant, allowing opportunities for clarification of questions and designing a data collection instrument that is reviewed for face validity help diminish the participant's unintentional lack of cooperation. Offering an environment that reduces threat and utilizing data collection techniques that provide for greater assurance of anonymity help to reduce a participant's refusal to answer questions that may be embarrassing or at worst, place them at risk. The risk of having missing data due to malicious intent is somewhat more difficult to deal with. This issue is somewhat variable based on the population to be studied. It was hoped that the population under investigation in the current study (Belizean nurses) may be less likely to maliciously alter the data than, for example, a college freshman completing a form in a sociology class. Finally, checking the form for completion upon

receipt can reduce clerical issues in data collection; double-checking data entry and the careful storage of original forms in a safe and secure area. Even if most or even all of these measures are in place it is very likely that there will be at least some data that will be missing from the original data set. For that reason, a plan to address this issue must be established.

Recommendations from Knapp (1998) to deal with missing data fall into five categories: (a) prevent it, (b) delete additional data, (c) impute estimates for the missing data, (d) work around it, and (e) study it (p. 244). These recommendations are listed in the author's preferred order of preference.

Procedures to reduce the risk of missing data have been discussed previously. The deletion of additional data is a possible method for addressing missing data, but one, which will ultimately reduce the sample size. The most conservative approach is list-wise deletion where a subject's entire data set is eliminated if any data is missing. With the projected small sample size in the proposed study, this method could result in a significantly reduced statistical power and increase the likelihood of a Type II error. Pair-wise deletion can be an option if the subject has missing data on one or more variables (Knapp, 1998). This method deletes the subject from correlational analyses that pertain to the missing variable. This is somewhat less conservative, but does allow the subject to be retained for some of the analyses.

Imputation, the selected method for addressing missing data in the currently proposed study, allows for the retention of greater volumes of data and is especially useful for studies with smaller sample sizes. Several methods for this approach are widely used and have both advantages and disadvantages. Substituting the group mean is

probably the most commonly used approach, but can be problematic and cause an artificial data point, create a smaller error term and/or lower the reliability of the instrument (Knapp, 1998, p. 247). The substitution of the subject's mean can be used if an item on a specific scale is missing, although this could artificially inflate the reliability of the instrument. Regression analysis can be conducted on data from subjects with full data to predict responses for those with missing data. Finally, common sense strategies can be implemented to manage items for which there is a logical response.

Plan implemented in the current study.

- List-wise deletion was used if subjects had greater than 25% of missing data.
- Modified Sexual Behavior Efficacy Subscale of the Providers Attitudes Questionnaire (MSBES(w)-PAQ): Pair-wise was used if more than one of the six items was missing. If only one item was missing, the mode for that subject was substituted for the missing value.
- Relationship Control Subscale of the Sexual Relationship Power Scale (SRPS-RC): Pair-wise deletion was used if more than two of the twelve items was missing. If one or two items were missing, the mode for that subject was substituted.
- Vicarious Experience-Condom Use Promotion with women (VE-CUP(w)): Pair-wise deletion was used if more than one of the five items was missing. If only one item was missing, the mode for that subject was substituted for the missing value.

- Omissions of data from the demographic section of the data collection tool are discussed in the description of sample portion of the analysis.

Missing data and the possible contributing factors is discussed in both the discussion and limitation sections of the dissertation. Possible correlations to key demographic variables and to consistently missing data could provide some rationale for its absence and may prompt closer investigation.

To evaluate research question #2, “Among a subset of Belizean nurses with lower sexual relationship power (SRP), what is the relationship between her positive vicarious experience related to promoting and teaching condom use information to women and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?” participants were first stratified based on their scores on the SRPS-RC. Individuals below the 50th percentile were considered to have lower SRP. Pearson r correlation statistic was then used to test the strength and direction of the relationship between participants’ scores on the items related to vicarious experience and the MSBES(w)-PAQ. Although not previously outlined, additional correlational statistics were conducted to evaluate this relationship in individuals scoring in the upper 50th percentile of the SRPS-RCS.

Analysis of open-ended question. Responses to the open-ended question, “What do you think is the *most* influential reason why you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS through sexual transmission?” were analyzed utilizing the basic principles of thematic analysis described by Morse and Field (1995). The process involves the search for and identification of

common threads that extend through the data. This can be accomplished a variety of ways. For the purposes of this study the responses to the question were transcribed verbatim. These quotations were then placed on index cards to allow for sorting and the identification of common threads throughout the data. This process was completed manually due to the small number and short answer format of the responses. This method “allows for easy retrieval of data and permits cards to be placed in more than one category” (Morse & Field, 1995, p. 135).

A number of complexities related to this international research may limit the validity of the studies findings. Numerous methodological components were incorporated into the study design to address these limitations. The investigator made multiple trips to Belize and has established partnerships with key individuals at the university as well as in the nursing community. The completion of pilot work in Belize not only provided psychometric data on the SRPS, but also allowed the Principal Investigator to explore potential barriers and facilitators to conducting this study. Access to the study population, data collection strategies, environmental issues and political climate were all challenges to completing the pilot study and were successfully addressed.

CHAPTER IV

Results

The purpose of this chapter is to present the study findings. First, the chapter describes the sample by presenting the demographic data as well as data obtained from questions specific to personal and professional experience with HIV/AIDS. Evaluation of the reliability and factor analyses of each of the instruments is then presented. This is followed by statistical analyses of the hypothesis and research questions. Research question number one is addressed using multiple regression analysis. Prior to addressing research question number two, a description of the sub-sample of nurses scoring in the lower 50th percentile on the Relationship Control Subscale of the Sexual Relationship Power Scale (SRPS-RC) is presented. Finally, the findings from the qualitative question are presented.

Description of the Entire Sample

Data was collected from 78 participants. It was determined that 14 participants did not meet the inclusion criteria and four participant's data exceeded the established cut-off of 25 % of missing data. A final sample of 60 was used for the data analysis. All participants were over the age of 21 years with most (41.7%) being between 31-40 years of age (see Table 3 and 4). Married or in a common-law relationship ($n = 34$, $n = 11$) were the predominate marital status reported at a combined 75% of the sample. Creole

and Mestizo accounted for 65% ($n = 39$) of the self-identified cultural affiliation.

Catholicism was selected by 43.3% ($n = 26$) as their religious affiliation.

Table 3. Description of Non-continuous Demographic Variables

Characteristics	Total Sample	
	(N = 60)	
	<i>n</i>	(%)
Age		
21-30	12	(20.0)
31-40	25	(41.7)
41-50	16	(26.7)
>50	7	(11.6)
Cultural Affiliation		
Chinese	1	(1.7)
Mayan	2	(3.3)
Garifuna	8	(13.3)
Creole	20	(33.3)
Mestizo	19	(31.7)
Other	10	(16.7)
Marital Status		
Single	12	(20.0)
Divorced	3	(5.0)
Married	34	(56.7)
Common-law	11	(18.3)
Religious Affiliation		
Catholic	26	(43.3)
Adventist	3	(5.0)
Church of Christ	2	(3.3)
Pentecostal	5	(8.3)
Anglican	5	(8.3)
Christian	7	(11.7)
Other	8	(13.3)
Missing	4	(6.7)

Table 3. Description of Non-continuous Demographic Variables cont.

Characteristics	Total Sample	
	(N = 60)	
	<i>n</i>	(%)
Nursing School		
Univ. of Belize (Bliss School of Nursing)	42	(70.0)
Nigeria	7	(11.7)
University of West Indies	2	(3.3)
Guatemala	3	(5.0)
Other	5	(8.3)
Missing	1	(1.7)
Expanded Role*		
Yes	25	(41.7)
No	32	(53.3)
Missing	3	(5.0)
Professional License		
LPN	16	(26.7)
RN	42	(70.0)
Missing	2	(3.3)
Employment Site		
Clinic	10	(16.7)
Hospital	36	(60.0)
School	2	(3.3)
Other	8	(13.3)
Missing	4	(6.7)

*Defined by role, not education such as rural nurse, nurse midwife, nurse anesthetist, nurse practitioner, or clinical specialist.

Table 3. Description of Non-continuous Demographic Variables cont.

Characteristics	Total Sample	
	(N = 60)	
	<i>n</i>	(%)
Years at Present Position		
1-2	14	(23.3)
3-4	6	(10.0)
5-10	14	(23.3)
>10	23	(38.3)
Missing	3	(5.0)
Year of Graduation		
1970-1975	2	(3.4)
1980-1987	13	(21.7)
1991-1999	14	(23.3)
2000-2009	23	(38.3)
Missing	8	(13.3)

Table 4. Description of Continuous Demographic Variables.

	Income in Belize Dollars	
	Total Sample (Total Household Income)	Total Sample (Personal Income)
	(N = 44)	(N = 51)
Valid	44	51
Missing	16 (26.7%)	9 (15.0%)
Mean	39303.23	26208.76
SD	24223.11	12439.12
Range	114000.00	73800.00
Minimum	6000.00	2200.00
Maximum	120000.00	76000.00

Note. 2 Belize Dollars=1 US Dollar

Table 4. Description of Continuous Demographic Variables, cont.

Years of Nursing Education	
Total Sample	
(N = 57)	
Valid	57
Missing	3 (5.0%)
Mean	3.16
SD	0.80
Range	3
Minimum	1
Maximum	4

Many of the participants (41.7%) considered themselves to be practicing in an expanded role as defined as midwifery, nurse practitioner or CNS (clinical nurse specialist), but no individuals responded that they had completed a master's degree or higher. The majority of participants, 70.0%, ($n = 42$) were licensed as registered nurses with the remaining being licensed practical nurses. Most were educated at the University of Belize, previously Bliss School of Nursing (70.0%, $n = 42$), with the next most frequently attended program being in Nigeria (11.7%, $n = 7$). The majority (61.6%, $n = 37$) of the nurses graduated from nursing school after 1991, with 38.3% graduating this decade. The nurses were most often employed in a hospital (60.0%, $n = 36$) or clinic (16.7%, $n = 10$) setting and had been in their current position for less than 10 years (56.6%, $n = 34$). Income data was collected as personal and total household income. Personal income was not reported by 15.0% of the participants and 26.7% of the participants did not report total household income. For those who did report, the mean total household income was 39,303 BZD (19,651 USD) per annum and the mean personal income was 26,208 BZD

(13,104 USD) per annum. It is important to note that participants were not asked if they were working full or part-time.

Background of HIV/AIDS Education and Experience

Results from questions regarding HIV/AIDS education, and both personal and professional experience with individuals with HIV/AIDS provided a more in-depth description of the sample. The participants have a great deal of professional experience with HIV/AIDS with 71.7% ($n = 43$) currently caring for patients with HIV/AIDS and 80.0% ($n = 48$) having done so in the past five years. The participants were generally able to identify that they see women at risk for HIV/AIDS (93.3%, $n = 56$) in their practice. Although only 65.0% ($n = 39$) participants responded that their current employer offers continuing education related to HIV/AIDS, 78.3% ($n = 47$) received HIV/AIDS content in their formal education and 88.3% ($n = 53$) have received content specifically related to women and the sexual transmission of HIV/AIDS.

Moving beyond the professional role, 78.3% ($n = 47$) of the participants responded that they knew some one personally who is currently living with HIV/AIDS and 73.3% ($n = 44$) knew someone who has died of HIV/AIDS. Table 5 provides the full description and results of these questions.

Table 5. Background of HIV/AIDS Education and Experience **N = 60**

Question 1. Do you see women at risk for contracting HIV/AIDS from sexual exposure?

Response	<i>n</i>	(%)
Yes	56	(93.3)
No	4	(6.7)

Table 5. Background of HIV/AIDS Education and Experience cont.

Question 2. Did you receive HIV/AIDS prevention content in your formal education?

Response	<i>n</i>	(%)
Yes	47	(78.3)
No	11	(18.3)
Missing	2	(3.3)

Question 3. Have you ever received information/education about HIV/AIDS that specifically addresses women and issues surrounding sexual transmission of the disease?

Response	<i>n</i>	(%)
Yes	53	(88.3)
No	7	(11.7)

Question 4. Does your current employer offer continuing education on HIV/AIDS?

Response	<i>n</i>	(%)
Yes	39	(65.0)
No	20	(33.3)
Missing	1	(1.7)

Question 5. In the past five years, have you cared for patients with HIV/AIDS as a diagnosis?

Response	<i>n</i>	(%)
Yes	48	(80.0)
No	11	(18.3)
Missing	1	(1.7)

Table 5. Background of HIV/AIDS Education and Experience cont.

Question 6. Do you currently care for patients with HIV/AIDS as a diagnosis?

Response	<i>n</i>	(%)
Yes	43	(71.7)
No	16	(26.7)
Missing	1	(1.7)

Question 7. Do you know someone personally who is living with HIV/AIDS?

Response	<i>n</i>	(%)
Yes	47	(78.3)
No	12	(20.0)
Missing	1	(1.7)

Question 8. Do you know someone personally who has died of HIV/AIDS?

Response	<i>n</i>	(%)
Yes	44	(73.3)
No	15	(25.0)
Missing	1	(1.7)

Missing Data

The demographic variables of total household income and personal income had a high percentage of missing responses ($n = 16, 26.7\%$; $n = 9, 15.0\%$), therefore this variable was not included in the answering of research question # 1. The SRPS-RC, the Modified Sexual Behavior Efficacy Subscale (with women) of the Provider's Attitude Questionnaire (MSBES(w)-PAQ) and the Vicarious Experience –Condom Use

Promotion with Women (VE-CUP(w)) were also evaluated for missing items. If a subject had more than 25% of responses missing on a single instrument, that subject was not included in analysis involving that instrument (pair-wise deletion). Otherwise, the subject's mode for the instrument was substituted for the missing response item. Two subjects required one item each to be substituted for the mode on the SRPS-RC. No subjects were dropped from analysis due to greater than 25% missing responses on any instrument.

Psychometric Analysis of Data Collection Instruments

The three individual questionnaires were evaluated for both internal consistency and construct validity. Cronbach's alpha was used to evaluate internal consistency and principle component analysis was used to explore the construct validity of the instruments.

Modified sexual behavior efficacy subscale (with women) of the provider's attitude questionnaire (MSBES(w)-PAQ). Total scores for the MSBES(w)PAQ were obtained for all sixty participants. The range of total scores was 11 to 60 ($M = 49.28$, $SD = 11.63$) with higher scores indicating higher self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV/AIDS. The six-item MSBES(w)-PAQ exhibited a strong reliability coefficient of .90 demonstrating similar reliability to the original instrument (.95; Ozer, et al., 2004). After evaluating the item statistics an improved reliability coefficient of .92 could have been achieved if item number 1 was deleted. Based on the results of the factor analysis (Table 6), the minimal improvement in internal consistency, and the desire to maintain variability, it was determined that item 1 would be left in the scale for further analysis.

Kaiser-Meyer-Olkin measure of sampling adequacy was (.83) demonstrating a high degree of common variance in the data matrix. Bartlett's test of sphericity was significant ($p = .00$) meaning the R-matrix is not an identity matrix. Principle component factor analysis with varimax rotation was conducted to explore the construct validity of the MSBES(w)-PAQ. Two criteria were employed to determine the number of factors to be retained; Kaiser-Guttman's criterion (retaining factors with eigen values > 1) and examination of the scree plot. Initial analysis revealed one factor with an eigen value of 4.13 that accounted for 68.9% of the total variance. Evaluation of the component matrix revealed factor loadings of all items to be $\geq .61$ (Table 6), which exceeds the generally accepted threshold of four or more loadings above .6 regardless of sample size (Stevens, 1996).

Table 6. Principle Component Analysis of the Modified Sexual Behavior Efficacy Scale (with women) of the Provider Attitude Questionnaire (MSBES(w)-PAQ) (N = 60).

Item (MSBES(w)-PAQ number)	Factor I
On a scale of 1 to 10 with 1 being not confident at all and 10 being extremely confident, how confident are you that you can do the following.	
Ask women about their sexual behavior? (1)	.61
Determine if a women's behavior places her at risk? (2)	.82
Deliver brief messages that support women who consistently use condoms to reduce their risk of contracting HIV? (3)	.89
Deliver brief messages to women who <i>do not</i> consistently use condoms to reduce their risk of contracting HIV? (4)	.90
Respond correctly to questions women may have about the correct use of condoms? (5)	.90
Offer support to women in negotiating condom use in difficult situations (for example; reluctant partner, new partner, threat of abuse, under the influence of drugs or alcohol)? (6)	.82

Vicarious experience condom use promotion with women scale (VE-CUP(w)). Total scores for the VE-CUP(w) were obtained for all sixty participants. The range of total scores was 10 to 25 ($M = 17.43$, $SD = 3.47$) with higher scores indicating higher levels of vicarious experience promoting condom use to women to reduce their risk of contracting HIV. The five-item VE-CUP(w) demonstrated internal consistency with a reliability coefficient of .74. This was considered to be acceptable based on the standard of .60 for exploratory analysis (Nunnally, 1978). Item statistics found that the deletion of item 3 would improve the internal consistency to .78. After examining the

inter-item correlation and covariance re-evaluating the item for clarity it was determined to eliminate the item and proceed with the principle component analysis with the remaining four items. The complete instrument including the deleted item number three can be found in Appendix III.

Kaiser-Meyer-Olkin measure of sampling adequacy was acceptable (.78) and Bartlett's test of sphericity was significant ($p = .00$) even with the small number of items. Principle component factor analysis with varimax rotation was conducted to explore the construct validity of the four-item VE-CUP(w). Kaiser-Guttman's criterion was again applied and the scree plot was examined. Initial evaluation revealed one factor with an eigen value of 2.21 and explained 60.4% of the total variance. All items loaded to the one factor above .70 (Table 7), above the threshold of .60 (Stevens, 1996).

Table 7. Principle Component Analysis of the Vicarious Experience Condom Use Promotion with Women Scale (VE-CUP(w)) (N = 60).

Item (VE-CUP(w) number)	Factor I
I have observed nurses/health care providers effectively promote and teach condom use to women to reduce the risk HIV. (1)	.82
I have observed nurses/health care providers effectively promote and teach condom use to women for any reason (i.e., contraception, STD prevention, etc.). (2)	.80
In my experience as a nurse, I have had opportunities to observe providers speak effectively to women about difficult or uncomfortable topics/issues. (4)	.76
I am able to identify role models in my practice who effectively promote and teach women about condom use for HIV prevention. (5)	.73

Relationship control subscale of the sexual relationship power scale (RCS-SRPS). Total scores for the SRPS-RC were obtained for all sixty participants. The range of total scores was 27 to 48 ($M = 36.37$, $SD = 6.14$) with higher scores equating to higher sexual relationship power in the primary sexual relationship. The 12-item SRPS-RC exhibited a reliability coefficient of .83, which was somewhat less than the pilot work demonstrated (.90; Nash, 2008). However, the coefficient still provides evidence of internal consistency. Item statistics did not demonstrate any improvement in internal consistency by the removal of any of the items.

Kaiser-Meyer-Olkin measure of sampling adequacy was acceptable (.78) and Bartlett's test of sphericity was significant ($p = .00$). Principle component factor analysis with varimax rotation was conducted to explore the construct validity of the SRPS-RC. Although the original Relationship Control Subscale was formed from 1 factor, it was decided to allow the statistical program to initially select the number of factors. This was done because the original study was conducted exclusively with Latinas and the current study, may have included Latinas, but also included participants from diverse cultural backgrounds, which may have impacted the results. Initial evaluation revealed three factors with eigen values greater than 1. The three-factor solution explained 60.7% of the total variance. The first factor had an eigen value of 4.34 and explained 36.2% of the total variance. Compared to factor one, factor two and three had eigen values closer to (1.59 and 1.35) and explained 13.2% and 11.2% of the total variance respectively. Factor loadings in the three factor initial solution are found in Table 8. Using a threshold of .6, no items loaded to more than one factor. Item 9 did not reach the threshold of .6 in this initial solution. Examination of the relationship of the items did not reveal any new

construct. Considering this, the construction of the original scale, and the desire to provide variability, it was determined that analysis of a one-factor solution was needed. The results of this factor analysis are found in Table 9. Based on the recommendation by Stevens (1996) that factors with 4 or more loadings above .6 are reliable regardless of sample size, and no item loading less than the generally accepted lower threshold of .4 it was concluded that the one factor solution would be retained. This is interpreted as all factors having a minimum of 15% shared variance with the construct (factor) (Stevens, 1996).

Table 8. Principle Component Analysis of the Relationship Control Subscale of the Sexual Relationship Power Scale (SRPS-RC) (N = 60), Initial Solution

Item (SRPS-RC number)	Factor		
	I	II	III
Most of the time, we do what my partner (boyfriend, spouse) wants to do. (1)	.78	-6.506E-5	.2
My partner won't let me wear certain things. (2)	.48	-.13	.68
When my partner and I are together, I'm pretty quiet. (3)	.10	.27	.75
My partner has more to say than I do about important decisions that affect us. (4)	.71	.11	.19
My partner tells me who I can spend time with. (5)	.25	-.03	.76
I feel trapped or stuck in our relationship. (6)	.60	.24	.13
My partner does what he wants, even if I do not want him to. (7)	.65	.49	.04
I am more committed to our relationship than my partner is. (8)	-.13	.66	.33
When my partner and I disagree, he gets his way most of the time. (9)	.26	.58	.38
My partner gets more out of our relationship than I do. (10)	.21	.83	-.08
My partner always wants to know where I am. (11)	.02	.45	.63
My partner might be having sex with someone else. (12)	.41	.62	.02

Note. Items loading above .6 are bolded.

Table 9. Principle Component Analysis of the Relationship Control Subscale of the Sexual Relationship Power Scale (SRPS-RC) (N = 60), Final Solution

Item (SRPS-RC number)	Factor I
Most of the time, we do what my partner (boyfriend, spouse) wants to do. (1)	.59
My partner won't let me wear certain things. (2)	.60
When my partner and I are together, I'm pretty quiet. (3)	.62
My partner has more to say than I do about important decisions that affect us. (4)	.60
My partner tells me who I can spend time with. (5)	.55
I feel trapped or stuck in our relationship. (6)	.58
My partner does what he wants, even if I do not want him to. (7)	.70
I am more committed to our relationship than my partner is. (8)	.47
When my partner and I disagree, he gets his way most of the time. (9)	.70
My partner gets more out of our relationship than I do. (10)	.55
My partner always wants to know where I am. (11)	.61
My partner might be having sex with someone else. (12)	.61

Analysis of Study Hypothesis and Research Questions

H₁: Belizean nurses' positive vicarious experience related to promoting and teaching condom use to women will be positively associated with greater self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV.

Evaluation of the variables measured by MSBES(w)-PAQ and the VE-CUP(w) found both to be normally distributed as evidenced by their close approximation to the normal curve. The assumption of homoscedasticity was evaluated by examining the plot of residuals against the independent variable and was found to be adequate. Graphing both variables demonstrated a linear relationship. Results of the Pearson correlation of participant's total score of the MSBES(w)-PAQ ($M = 49.28$, $SD = 11.63$) and the total score of the VE-CUP(w) ($M = 14.32$, $SD = 3.10$) revealed a statistically significant ($p = .002$) positive correlation of $r = .40$. Positive vicarious experience with condom use promotion accounted for 16.0 % ($r^2 = .16$) the variance in self-efficacy to promote condom use to women to reduce the risk of contracting HIV/AIDS.

RQ₁: What is the relationship between Belizean nurses' sexual relationship power in her primary sexual relationship, vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV, interpersonal and socio-cultural variables; and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?

Correlations between the multiple independent variables and the dependent variable (self-efficacy to promote condom use to women to prevent HIV/AIDS) were evaluated (Table 10). Pearson r statistic was used to evaluate the relationship between

the continuous variables of relationship control, years of education and vicarious experience promoting condom use to women, and the dependent variable. Vicarious

Table 10. Relationship Between Independent Variables and Score on the Modified Sexual Behavioral Efficacy Scale (with women) of the Providers Attitude Questionnaire (MSBES(w)-PAQ)

Independent Variable	Sample Size	Correlation	Significance Testing
VE-CUP Score (Vicarious Experience-Condom Use Promotion (with women))	N = 60	$r = .40$	$p = .002$
Years of Education (Nursing)	N = 57	$r = .29$	$p = .029$
SRPS-RC	N = 60	$r = .16$	$p = .223$
Year of Graduation (from Nursing School)	N = 52	$r_s = .06$	$p = .670$
Age	N = 60	$r_s = -.05$	$p = .724$
Years at Present Job	N = 57	$r_s = .10$	$p = .483$
Culture	N = 60	$\eta^2 = .09$	$p = .381$
Marital Status	N = 60	$\eta^2 = .01$	$p = .854$
Religious Affiliation	N = 56	$\eta^2 = .07$	$p = .745$
Type of Nursing License	N = 58	$\eta^2 = .01$	$p = .467$
Expanded Role	N = 57	$\eta^2 = .00$	$p = .792$

Note: r = Pearson r coefficient; r_s = Spearman rho coefficient; η^2 = eta squared.
Significant at $p < .05$

experience was significantly correlated with the dependent variable (self-efficacy to promote condom use to women to reduce HIV risk ($r = .40, p = .002$) as was years of nursing education ($r = .29, p = .029$).

Spearman rho statistic was used to evaluate the relationship between the variables measured by an ordinal scale (year of graduation, age, and years in present job) and the dependent variable. None were statistically significantly correlated to the dependent variable. Correlations between categorical variables with (culture, marital status, religious affiliation, nursing license, and expanded role) and the dependent variable were evaluated with the eta-squared statistic with no significant correlations found. Had statistical significant correlations between any of the ordinal or categorical independent variables and the dependent variable been found, generalized linear modeling would be the preferred statistical technique to develop a model to predict self-efficacy to promote and teach condom use to women to reduce the risk of HIV.

Stepwise multiple regression analysis was used to evaluate the impact of the two statistically significant independent variables of vicarious experience and education on the dependent variable of self-efficacy to promote condom use to women to reduce the risk of contracting HIV/AIDS. Prior to this evaluation, the independent variables were evaluated and found to be normally distributed, and not statistically correlated with each other ($r = -.037, p = .79$). Although both model one ($F(1,55) = 11.23, p = .00$) which included only the variable of score on VE-CUP(w) and model two ($F(2,54) = 9.61, p < .00$) which also included years of education were both statistically significant, the two-predictor model accounted for a greater degree of total explained variance. The regression equation derived from the two-predictor model was had an R-squared = .26. Adjusted R-squared = .24 indicating that approximately 24.0% of the variance in self-efficacy to promote condom use to women to reduce the risk of contracting HIV/AIDS was predictable from score on the VE-CUP(w) instrument (partial $r^2 = .17$) and years of

nursing education (partial $r^2 = .09$). Plots of the data revealed no serious violations of normality, homoscedasticity, or linearity. No influential outliers were identified. Collinearity statistics were evaluated and found to be acceptable (Tolerance = .999, VIF (variance inflation factor) = 1.001). The resulting regression equation from model two is as follows:

y (MSBES(w)-PAQ score) = 12.899 + 1.562 (VE-CUP(w) score) + 4.472 (years of nursing education).

This model predicts a nurse's self efficacy to promote and teach condom use to women to prevent HIV/AIDS based on her vicarious experience with condom use teaching and promotion and her years of nursing education.

RQ₂: Among a subset of Belizean nurses with lower sexual relationship power, what is the relationship between her positive vicarious experience related to promoting and teaching condom use information to women and her self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV?

Description of Participants Scoring in the Lower 50th Percentile of SRPS-RC

As outlined in Chapter 3, a sub-set of data from nurses scoring in the lower 50th percentile on the SRPS-RC was used to answer research question three. The resulting $n = 29$ (versus 30) was established because several nurses had the same score at the 50th percentile cut-point.

Although the research question does not address a comparison to the nurses who scored in the upper 50th percentile, Table 11 and 12 are presented to illustrate that on most demographic variables, the two groups appear similar. Statistical testing evaluating differences in demographic variables between the two groups indicated no differences

between the groups on any of the demographic variables that could be evaluated. Note that the categorical variables of cultural and religious affiliation contained multiple cells with counts below five, which precludes the usage of the chi-squared statistic. The response option was not dichotomous; therefore the Fischer's Exact Test was not used.

Table 11. Description of Non-continuous Demographic Variables Upper and Lower 50th Percentile of SRPS-RC.

Characteristics	Upper 50 th % SRPS-RC		Lower 50 th % SRPS-RC	
	(N = 31)		(N = 29)	
	<i>n</i>	(%)	<i>n</i>	(%)
Age				
21-30	6	(19.4)	6	(20.7)
31-40	14	(45.2)	11	(37.9)
41-50	8	(25.8)	8	(27.6)
>50	3	(9.7)	4	(13.8)
Cultural Affiliation				
Chinese	0	(0.0)	1	(3.4)
Mayan	1	(3.2)	1	(3.4)
Garifuna	3	(9.7)	5	(17.2)
Creole	9	(29.0)	11	(37.9)
Mestizo	14	(45.2)	5	(17.2)
Other	4	(12.9)	6	(20.7)
Marital Status				
Single	5	(16.1)	7	(24.1)
Divorced	2	(6.5)	1	(3.4)
Married	19	(61.3)	15	(51.7)
Common-law	5	(16.1)	6	(20.7)
Religious Affiliation				
Catholic	17	(54.8)	9	(31.0)
Adventist	1	(3.2)	2	(6.9)
Church of Christ	1	(3.2)	1	(3.4)
Pentecostal	3	(9.7)	2	(6.9)
Anglican	1	(3.2)	4	(13.8)
Christian	1	(3.2)	6	(20.7)
Other	5	(16.1)	3	(10.3)
Missing	2	(6.5)	2	(6.9)

Table 11. Description of Non-continuous Demographic Variables Upper and Lower 50th Percentile of SRPS-RC cont.

Characteristics	Upper 50 th % SRPC-RC		Lower 50 th % SRPS-RC	
	(N = 31)		(N = 29)	
	<i>n</i>	(%)	<i>n</i>	(%)
Nursing School				
Univ. of Belize (Bliss School of Nursing)	23	(74.2)	19	(65.5)
Nigeria	1	(3.2)	6	(20.7)
University of West Indies	1	(3.2)	1	(3.4)
Guatemala	1	(3.2)	2	(6.9)
Other	4	(12.9)	1	(3.4)
Missing	1	(3.2)	0	(0.0)
Expanded Role				
Yes	11	(35.5)	14	(48.3)
No	19	(61.3)	13	(44.8)
Missing	1	(3.2)	2	(6.9)
Professional License				
LPN	6	(19.4)	10	(34.5)
RN	24	(77.4)	18	(62.1)
Missing	1	(3.2)	1	(3.4)
Employment Site				
Clinic	4	(12.9)	6	(20.7)
Hospital	17	(54.8)	19	(65.5)
School	1	(3.2)	1	(3.4)
Other	7	(22.6)	1	(3.4)
Missing	2	(6.5)	2	(6.9)

Table 11. Description of Non-continuous Demographic Variables Upper and Lower 50th Percentile of SRPS-RC cont.

Characteristics	Upper 50 th % SRPS-RC		Lower 50 th % SRPS-RC	
	(N = 31)		(N = 29)	
	<i>n</i>	(%)	<i>n</i>	(%)
Years at Present Position				
1-2	5	(16.1)	9	(31.0)
3-4	2	(6.5)	4	(13.8)
5-10	11	(35.5)	3	(10.3)
>10	12	(38.7)	11	(37.9)
Missing	1	(3.2)	2	(6.9)
Year of Graduation				
1970-1975	1	(3.2)	1	(3.4)
1980-1987	8	(25.8)	5	(17.2)
1991-1999	10	(32.3)	4	(13.8)
2000-2009	8	(25.8)	15	(51.7)
Missing	4	(12.9)	4	(13.8)

Table 12. Description of Continuous Demographic Variable Upper and Lower 50th Percentile of SRPS-RC.

Education (years)	Upper 50 th % SRPS-RC		Lower 50 th % SRPS-RC	
	(N = 30)		(N = 27)	
Valid	30		27	
Missing	1 (3.2%)		2 (6.9%)	
Mean	3.27		3.04	
SD	0.83		0.76	
Range	3		3	
Minimum	1		1	
Maximum	4		4	

Frequency data demonstrates that Mestizo and Creole are the most frequently reported cultural affiliations among both groups (74.2% and 75.1%), and Christian denominations are the most frequently reported religious affiliation among both groups (77.3% and 82.7% (54.8% and 31.0% Catholic, respectively)).

In order to produce cell sizes that would allow the usage of the chi-squared statistic to determine if there was a significant difference in marital status between the two groups, responses were combined to form two groups (married and cohabitating; single and divorced). This did not result in a statistically significant difference in marital status between the two groups.

Evaluation of the variables measured by MSBES(w)-PAQ and the VE-CUP(w) found both to be normally distributed as evidenced by their close approximation to the normal curve. The assumption of homoscedasticity was evaluated by examining the plot of residuals against the independent variable and was found to be adequate. Graphing both variables demonstrated a linear relationship. Results of the Pearson correlation of participant's total score of the MSBES(w)-PAQ ($M = 49.93$, $SD = 13.02$) and the total score of the VE-CUP(w) ($M = 14.45$, $SD = 3.21$) revealed a statistically significant ($p = .002$) positive correlation of $r = .56$. Among Belizean nurses with lower relationship power, 31.0% ($r^2 = .31$) of the variance in self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV/AIDS was accounted for by positive vicarious experience with condom use promotion and teaching.

Findings from the Qualitative Analysis of Open-ended Question

Of the 60 participants, 50 responded at some level to the opened-ended question. Data were analyzed first by the Principal Investigator. Issues of rigor in the analysis of

data were addressed through consultation with the chair of the dissertation committee and a doctorally prepared qualitative expert.

Initial analysis by the investigator revealed 21 specific themes from the original data set. There were three responses that either did not relate directly to the question or were unable to be interpreted or understood. These responses were not included in this analysis. Further exploration led to a second level of interpretation with six broader themes. These themes were (1) religious and moral influence, (2) ignorance, (3) cultural influence, (4) practice and logistical issues, (5) gender disparity, and (6) nurse anticipated negative response. The chair and the qualitative expert were asked to sort the responses into these categories. Agreement was found between the investigator, chair and expert. Many of the participants responded to the open-ended question by stating more than one idea in their response. This was particularly true in regard to the themes of culture and religion. Statements such as “religious and cultural beliefs”, or “how she was brought up and her religious beliefs”, made it seem logical to combine the two themes.

Through analysis of sociocultural and economic factors, it is suggested that cultural beliefs and practice, along with national and international forces, support and sustain gender inequality (Duffy, 2005). Issues of gender inequities are culturally derived (Rankin, & Aytac, 2008; Bloch, & Lemish, 2005). Therefore, this theme was also identified as a component of culture. The theme of practice and logistical issues was renamed practice constraints to be more inclusive. This final analysis resulted in the four broad concepts of (1) cultural influence, (2) ignorance, (3) practice constraints, and (4) nurse anticipated negative response.

After some consideration and additional evaluation it was clear that the four final themes that emerged could be divided based on how the nurse interpreted the question. When the participant responded with a statement that reflected a cultural theme, the response generally was, “Their [patient] religious or cultural beliefs”, or “Due to patient beliefs or religion”. The same is true for statements reflecting an ignorance theme, “They [patient] don’t believe there is a risk”, or “Due to lack of education, they [patient] refuse to listen”. Issues surrounding practice also reflect the nurse’s focus on outside variables influencing their decision-making. This is illustrated by the nurse responding to the statement by placing some of the responsibility back toward the patient via the culture and ignorance of the population or variables related to practice. These can be interpreted as extrinsic influences.

When the participant responded with a statement that was categorized as a nurse anticipated negative response such as, “Time management”, “Touchy subject”, or “Continuing education not up to date”, a clearly different focus emerged. These themes reflected the nurse looking inward to self and the role to identify cause, which could be interpreted as an intrinsic influence.

After establishing the two broad categories of intrinsic and extrinsic influences and the sub-categories of cultural influence, ignorance, practice constraints, and nurse anticipated negative response; it became clear that the decision to discuss condom use with women to prevent HIV is complex. This decision is influenced by variables that are both within and outside the nurses’ ability to control or modify. From this analysis, it would appear that the nurses in Belize perceive that many barriers to promoting and

teaching condom use to women to reduce the risk of contracting HIV come from variables beyond their control. Excerpts from the analysis are found in Table 13.

Table 13. Excerpts from and Analysis of the Open-ended Question

“What do you think is the most influential reason you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS through sexual transmission?”

Participant (Nurse) Responses

Extrinsic (Not of the nurse)

Cultural influence

- Their culture, where they're not allowed to use any type of protection.
- In Belizean culture, it is not the norm for people to speak openly about sexuality issues.
- Their Christian backgrounds and how open they are to talk about sex.
- Another one is the Mennonite women, they will not use because of their religious beliefs.
- Cultural background and religious beliefs.
- Some religious denominations believe in going forth and reproducing.
- Language barrier.
- Some translators do not accurately translate what you say.
- When they are accompanied by a defensive or controlling partner.
- Fear of spouse.

Ignorance

- Under education of women.
- Illiteracy as well as ignorance
- Some due to lack of education, may refuse to listen
- Our older generation may follow male and believe there is no risk.

Practice constraints

- Continuing education not totally up to date.
- Time management.
- Not enough room for privacy.
- Surrounding not adequate.

Intrinsic (Nurse-based)

Nurse anticipated negative response

- Very touchy subject that people get defensive about.
 - Patient might get offended or try to avoid topic.
 - Her resistance to engage in communication.
 - Not all women are comfortable talking about sex in general.
 - Responsiveness and unreceptiveness
-

Summary of Findings

The psychometric properties of all three data collection instruments (MSBES(w)-PAQ, SRPS-RC, and VE-CUP(w)) were found to be both valid and reliable when used with the study population. Vicarious experience promoting and teaching condom use to women to reduce their risk of contracting HIV was found to be significantly correlated with Belizean nurses' self-efficacy to do so ($N = 60, r = .40, p = .002$). An even stronger positive correlation ($n = 29, r = .56, p = .002$) was found between these variables within the subset of nurses with lower relationship control (lower 50th percentile of the SRPS-RC). Years of nursing education were also found to contribute to a nurse's self-efficacy to promote and teach condom use to women to reduce their risk of contracting HIV ($N = 57, r = .29, p = .029$). A regression equation was constructed to predict a nurse's self-efficacy to promote and teach condom use to women to reduce their risk of contracting HIV and included the variables of years of nursing education and score on the MSBES(w)-PAQ as predictors. This model accounted for 24% of the variance in self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV.

Findings from the qualitative analysis of the open-ended question demonstrated the complexity of the issue of nurse-patient interactions, in this case, specifically a topic that has a sexual context. The analysis pointed to two broad categories of variables identified as reasons why a nurse may not talk to every women about condom use to reduce her risk of contracting HIV; intrinsic and extrinsic factors. Although the study design did not allow for the qualitative findings to be truly triangulated with the quantitative findings, these findings added to the richness and depth of the study. These

findings provided insight into participant identified barriers to condom use promotion and teaching to women in Belize to reduce the risk of HIV.

CHAPTER V

Discussion

The purpose of this study was to evaluate the relationship between selected variables and a nurse's self-efficacy to promote and teach condom use to women in Belize to reduce the risk of contracting HIV. These selected variables included the nurses' positive vicarious experience observing other nurses or health care providers promoting and teaching condom use to women, interpersonal/socio-cultural variables and the nurses' sexual relationship power in their primary sexual relationship. This chapter explores the study's key findings in the context of the current literature and in relation to the theoretical framework. Limitations to the study are then outlined. Finally, strategies for the application of the findings to clinical practice are suggested, which is followed by policy considerations as well as recommendations for future research based on the study findings.

Findings in the Context of the Literature and Theoretical Framework

Hypothesis. Congruent with Bandura's self-efficacy theory (1986, 1997), data analysis evaluating the hypothesis supported that vicarious experience with the promotion and teaching of condom use to women to reduce HIV risk is a significant contributor ($r = .40, p = .002$) to the development of Belizean nurses' self-efficacy to do so. Vicarious experience as an important variable to positive self-efficacy has been established throughout the literature. This is demonstrated by an early study (Laschinger, 1996) that

recommends health professionals be provided with opportunities to increase their health promotion counseling skills through actual or simulated sessions, or via modeling by credible others. In the absence of role models, even self-efficacy derived from task performance is affected (Tresolini & Stritter, 1994). In a study of nurse practitioner students, Hayes (1998) found a significant positive correlation ($r = .37, p < .001$) between mentoring and self-efficacy. More recent studies (Tourigny & Pulich, 2005; Buckley & Malouff, 2005) also support the role of vicarious experience through modeling as a method to improve self-efficacy in the clinical setting.

Predicting Nurse's Self-efficacy to Promote and Teach Condom Use to Women to Reduce the Risk of Contracting HIV

Research question # 1. In addition to vicarious experience, level of nursing education was also a statistically significant ($r = .29, p = .029$) contributor to a nurse's self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV. These variables were used to construct the regression model found in Chapter 4, page 71. Similar results were found in a study with counseling students (Tang et al., 2004) that examined factors influencing counseling self-efficacy. An overall examination of the relationships among demographic variables and total counselor self-efficacy revealed that self-efficacy was most strongly linked to course work ($r = .59, p < .01$). Other contributing variables included internship hours ($r = .47, p < .01$) and clinical instruction ($r = .40, p < .01$). Although the study specifies the type of instruction given and the current study uses years of nursing education as the variable, certain similarities are evident. An additional study that points to the influence of education level on self-efficacy is the study of nursing students by Laschinger, 1996. The study with 114

undergraduate baccalaureate-nursing students in a Canadian university found a statistically significant difference in health promotion counseling self-efficacy between the first and fourth year students.

The current study results demonstrate that although education level (partial $r^2 = .09$) did significantly contribute to the model to predict self-efficacy to promote and teach condom use to women to reduce the risk of HIV, the most important contributor to the model was vicarious experience (partial $r^2 = .17$). Again, this is congruent with Bandura's theory. Of the numerous predictive cues that influence behavior at any given moment, none is more common or effective than the actions of others (Bandura, 1977, p. 87). Bandura extends this to include not only actual modeling, but the use of modeling through technology as well. All of the vicarious modes of influence-whether conveyed through effective actual modeling, symbolic modeling, videotaped self-modeling, or cognitive self-modeling-enhance efficacy beliefs and improve performance (Bandura, 1996, p. 95).

Variables not used in the prediction model.

Other than level of nursing education, none of the other demographic variables made a statistically significant contribution to the final regression model. Theoretically, if "type of facility where currently employed" was in asked in a more specific way, such as "do you work in an area where condom use to reduce HIV risk is promoted?" it is plausible to think that that variable may have been added to the prediction model.

The variable of the nurse's sexual relationship power in her primary relationship as measured by the SRPS-RC was not found to be significantly correlated ($r = .16, p = .223$) with the dependent variable of self-efficacy to promote and teach condom use to

women to reduce the risk of contracting HIV when tested with the entire sample. Possible reasons for this might include the distribution of scores for the instrument. The possible range of scores on the SRPS-RC is 12 to 48. The actual range seen in the sample was 21 to 48 and was negatively skewed.

Self-efficacy and Nurses with Lower Sexual Relationship Power

Research question # 2. When vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV was correlated with self-efficacy to do so in a subset of nurses with lower sexual relationship power, a statistically significant positive relationship was found ($r = .56, p = .002$). This is a stronger correlation than was found in the entire sample ($r = .40, p = .002$). Although not included as part of the original data analysis, when the relationship between vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV and self-efficacy to do so was evaluated in a subset of nurses in the higher 50th percentile of SRPS-RC ($n = 31$), no significant relationship was found ($r = .255, p = .166$). In light of this finding, although lower sexual relationship power itself may not be a direct predictor of self-efficacy, Belizean nurses with lower sexual relationship power may find even greater benefit in vicarious experiences promoting and teaching condom use to women to reduce their risk of HIV than Belizean nurses with greater sexual relationship power.

Qualitative Findings

Responses to the open-ended question, “What do you think is the most influential reason you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS through sexual transmission?” were similar to findings from a

variety of studies that found nurses identify a variety of personal, professional and cultural influences that may prevent them from delivering prevention messages. This is especially true when the subject matter is emotionally provocative or personal, such as condom use promotion, whether for HIV prevention or for contraception. Health promotion activities related to sexual health as well as the constraints of time and expertise was identified as particular concerns for both doctors and nurses in a British study by Gott, Galena, Hinchliff, and Elford, (2004). In another study evaluating variables impacting the delivery of prevention messages, Aquilino, Goody, and Lowe (2003) found that not having enough time, dealing with clinic priorities and not having appropriate training were all identified by nurses as issues that may prevent them from delivering smoking cessation messages. The cultural variables of lack of education, gender inequality, religion and moral constraints that were identified by nurses in the current study as factors that were influential in their decision to speak to women about condom use to reduce the risk of contracting HIV/AIDS have also been identified extensively in the literature (Dunkle, et al., 2004; Harvey, et al., 2002; Maharaj & Cleland, et al., 2005; Pulerwitz, et al., 2002; Stansbury, & Sierra, et al., 2004).

Although outcome expectancy was not a variable under investigation in the current study, Bandura (1997) has identified it as being closely related to self-efficacy. It was somewhat surprising to the investigator that through the analysis of the open-ended question, this concept did not surface. The idea that “it’s not worth it, because they won’t change anyway”, a common theme expressed by healthcare workers in the U.S., was not explicitly identified by the nurses in Belize. Although not directly articulated, it is possible that statements such as “it’s not the norm for people to talk openly about

sexuality issues”, or “may refuse to listen”, may imply a level of negative outcome expectancy and may be a culturally derived influence

New Instrumentation

Modified sexual behavior self-efficacy scale (with women) of the provider’s attitude questionnaire (MSBES(w)-PAQ). The variable of a nurse’s self-efficacy to promote and teach condom use to women to reduce the risk of contracting HIV was measured by the MSBES(w)-PAQ. Psychometric analysis of the MSBES(w)-PAQ found the scale to be reliable (Cronbach’s alpha = .90) in the study population and demonstrate construct validity. These findings were similar (Cronbach’s alpha = .95) to the original instrument by Ozer, et al., 2004. The current study results were found without requiring the deletion of any of the items. Further evaluation of this instrument with data from a variety of populations will aid in its refinement. The ability to assess a nurse’s self-efficacy to promote and teach condom use to women to reduce HIV risk is an important first step in planning interventions to change behavior

Vicarious experience condom use promotion with women scale (VE-CUP(w)). The variable of vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV was measured by the VE-CUP(w). This instrument was constructed from a series of self-evaluative questions regarding vicarious experience specific to condom use promotion in women. These questions were developed based on the principles of vicarious experience explicated by Bandura (1986). The final instrument consisting of 4 items was found to be reliable (Cronbach’s alpha = .78) with the deletion of the one-item. This instrument also demonstrated construct validity. Like the MSBES(w)-PAQ, this instrument can benefit from study beyond the

current population. The instrument has a small number of items (4) and may further explicate the variable of vicarious experience with the development of additional items based upon Bandura's framework.

Limitations

Many of the limitations to this study are in the area of study design. The cross-sectional design provides only information regarding a specific point in time. This does not allow for the understanding of how participants may change over time.

Threats to external validity. The study was conducted with a sample, that although was representative of the population, limits the generalizability to nurses beyond the countries borders. The utilization of convenience sampling versus random sampling also limits the generalizability.

Threats to internal validity. Selection bias may also have influenced the results. Nurses who attended the conference may have differed in their demographic representation and may have scored differently on any of the instruments compared with those who did not attend the conference. Reasons why the nurse may not have attended the conference may have also influenced the results. Scores on the SRPS-RC may not have been as high if some of the nurses that did not come to the conference did so due to their partner's influence. Conversely, nurses who felt they did need the content presented at the conference may not have attended. In the future, it may be helpful to obtain data by actually traveling to the various districts and collecting data in those areas, perhaps at job sites.

Demographic data collection. The results obtained from the demographic data collection instrument may have been more meaningful if participants were able to write

in their age and cultural affiliation as opposed to having only a force-choice option. The utilized design resulted in ordinal instead of continuous data for age and forced 16.7% of the participants to select “other” as cultural affiliation. Large percentages of missing income data (total household, 26.7% and personal income 15.0% missing) prevented any meaningful analysis of relationships between income and the study variables. One cause for this may have been that the participants were asked to provide their income instead of having income ranges provided for participants to select. While providing ranges may result in less exact data, it may increase the percentage of respondents and the amount of data available for analysis. An additional reason for the large amount of missing data may be that the term and concept of annual income may not be widely used in Belize. Amount of income is frequently expressed as weekly or monthly. This was not understood during instrument development.

The design of the open-ended question provided some fascinating data that will help guide future research in the study area. Unfortunately, due to the design of the question and the failure to establish a priori that it would be triangulated with the quantitative data, there are limitations to its usefulness.

Recommendations

Implications to nursing practice, healthcare policy and funding, as well as research are discussed below. Although it is clear in this study, as well as in previous work, the cultural fabric of a country impacts the health and well being of its’ citizens. The ability to influence change at a cultural level is difficult and arguably, may not be appropriate in some cases. The recommendations based on this study sought to work within the established and diverse cultural framework of the country.

Nursing practice. The findings from this study clearly demonstrate that vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV is related to Belizean nurse's self-efficacy to do so. An even stronger relationship was found in nurses with lower sexual relationship power in their personal relationship. Strategies to provide a variety of positive modeling experiences to nurses either in person or through media may aid in developing the needed self-efficacy for nurses to increase the number of women they are speaking to about condom use to reduce their risk of contracting HIV. It is hoped that the improvement in self-efficacy will impact nursing behavior and increase the number of women receiving information about condom use to reduce HIV risk, with the ultimate goal of decreasing HIV incidence rates in Belize.

Education level was found to be a significant variable contributing to the self-efficacy of Belizean nurses to promote and teach condom use to women to reduce the risk of HIV. It may be that being in school longer, may increase the opportunities for positive vicarious experience. This needs to be further evaluated by examining what modeling opportunities are currently available throughout the different programs.

It is not without the understanding that the promotion and teaching of condom use to women to reduce HIV risk takes place in an environment that has been previously identified as one with many extrinsic and intrinsic factors that are working against achieving this goal. Because of the relatively small population of Belize and even smaller number of nurses (< 400 by most estimates), individual mentoring may not be realistic. It may be more reasonable to consider an intervention utilizing a multi-media approach. Additional recommendations for the leadership and management of practice

sites, beyond the enhancement of self-efficacy, include finding innovative and creative ways to provide private space for nurses to promote and teach their female patients on the use of condoms for the reduction of the risk of HIV.

Healthcare policy and funding implications. As discussed in Chapter 2, until a method of protection that is completely within the control of the female, such as topical microbicides, outside of abstinence, condoms are the best mode of protection against sexually acquired HIV currently available to both men and women. The context in which the use of condoms for HIV risk reduction is used is most certainly influenced by how gender roles are culturally defined in a country, and by the value the country places on its women and girls (Dunkle, et al., 2004; Harvey, et al., 2002; Maharaj & Cleland, et al., 2005; Pulerwitz, et al., 2002; Stansbury, & Sierra, et al., 2004).

Activities are underway in Belize to raise awareness regarding health implications in women related to power differentials that are culturally derived. The Women's Information Network is the nation's principal clearinghouse for information regarding this specific issue. Members of this network are both non-governmental organizations as well as government and private sector entities involved with women's issues. This type of organization and those like it require funding to impact a centuries long imbedded view of the value of women.

The current research demonstrated that some nurses identified the impact that religion and culture have on the women of their country to insist on condoms. This is not unique to the country of Belize. An example of the influence that religious beliefs have on the allocation of HIV/AIDS funding comes from the U.S. government. Although Belize is not a direct recipient of The (US) President's Emergency Plan for AIDS

(PEPFAR) funds at this time, these funds carry with them the stipulation that 1/3 of prevention programs be “abstinence only” programs, specifically, not to include condom use messages.

Funding for the development of programs to enhance a women’s ability to insist on condoms for HIV protection is woven into the funding streams of many of the non-governmental organizations in Belize, but by far the major funding for HIV/AIDS initiatives comes from The Global Fund to Fight AIDS, Tuberculosis, and Malaria. One of the key priorities identified by the grant submitted by Belize is to address issues specific to the vulnerability of women and youth (The Global Fund to Fight AIDS, Tuberculosis, and Malaria). Based on the results of the current study, it would seem prudent to utilize some of those funds to support the countries’ nurses by providing funds to improve self-efficacy, impact nursing behavior and increase the number of women receiving information about condom use to reduce HIV risk. The ultimate goal of funding such programs would be decreasing HIV incidence rates in Belize.

Research. Conducting socio-behavioral research in Belize can be impeded by a variety of issues. The University of Belize is striving to enhance its ability to support the development of international partnerships with universities interested in collaborative research endeavors. Lack of in-country funding is a barrier that must be overcome through creative partnerships that are mutually beneficial.

A logical extension of the current research could include an interventional study evaluating the efficacy of programming to increase Belizean nurses’ vicarious experience promoting and teaching condom use to women to reduce the risk of contracting HIV. An additional opportunity may be found in the exploration of HIV prevention course content

at the University of Belize (UB). With the findings of the current study identifying nursing education level as a statistically significant predictor of self-efficacy to promote and teach condom use to women to reduce HIV risk, and with 70.0% of the sample graduating from the UB, this would appear to be a reasonable place to start. Both of these suggestions ultimate aim is to reduce the incidence rates of HIV in Belize. Continued evaluation of the MSBES(w)-PAQ and the VE-CUP(w) in other populations may help to further validate the psychometric properties of these instruments and extend their use.

Of course, further research into the systemic, political, and cultural issues that plague nearly all of the countries most impacted by HIV/AIDS is an area that continues to provide opportunities for exploration. Unfortunately, much of this research is focused on the identification of issues and not necessarily on the development of solutions.

REFERENCES

- Ackermann, L., & de Klerk, G. (2002). Social factors that make South African women vulnerable to HIV infection. *Health Care for Women International*, 23(2), 163-172.
- AIDS-Free World. (2008). Long-awaited UN Women's Agency now within reach. Retrieved from <http://Press@ aids-.freeworld.org>
- Aquilino, M. L., Goody, C. M., & Lowe, J. B. (2003). WIC providers' perspective on offering smoking cessation interventions. *Journal of Maternal/Child Nursing*, 28(5), 326-332.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychology Review*, 84, 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4 pp. 71-81). New York: Academic Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.
- Barta, S. K., & Stacy, R. D. (2005). The effects of a theory-based training program on nurses' self-efficacy and behavior for smoking cessation counseling. *The Journal of Continuing Education in Nursing*, 36(3), 117-123.

- Belize Country Report. UNAIDS: The Joint UN Programme on AIDS. Retrieved from http://data.unaids.org/pub/report/2006/2006_country_progress_report_belize_en.pdf
- Bloch, L. R., & Lemish, D. (2005). "I know I'm a *Freierit*, but...": How a key cultural frame (en)genders a discourse of inequality. *Journal of Communication*, 55(1), 38-55.
- Bloom, M. (2008). What is a woman worth? The feminization of a pandemic. *On the Issues: The Progressive Woman's Magazine*. Retrieved from http://www.ontheissuesmagazine.com/may08/may2008_3.php
- Bruckner, H., & Bearman, P. S. (2005). "After the promise: the STD consequences of adolescent virginity pledges". *Journal of Adolescent Health*, 36(4), 271-278.
- Buckley, G. I. & Malouff. (2005). Using modeling and vicarious reinforcement to produce more positive attitudes toward mental health treatment. *The Journal of Psychology*, 139(3), 197-209.
- Clark, S., Bruce, J., & Dude, A. (2006). Protecting young women from HIV/AIDS: The case against child and adolescent marriage. *International Family Planning Perspectives*, 32(2), 79-88.
- Cohen, J. (1977). *Statistical power analysis for behavioral sciences*. Lawrence Erlbaum Associates, Inc.
- Commission to Eliminate All Forms of Discrimination Against Women (CEDAW). (1996). Retrieved from <http://daccessdds.un.org/doc/UNDOC/GEN/N96/N9631219.pdf?>

Commission to Eliminate All Forms of Discrimination Against Women (CEDAW).

(2005). Retrieved from

unhchr.ch/TBS/doc.nsf/e121f32fbc58faafc1256a2a0027ba24/be8e3b2ab1

[0d](#)

Cooper, D., McCausland, W. D., & Theodossiou, I. (2006). The health hazards of unemployment and poor education: The socioeconomic determinants of health duration in the European Union. *Economics & Human Biology*, 4(3), 273-297.

Country Studies-Belize (1992). Retrieved from <http://www.countrystudies.us/belize/>

Dilorio, C., Dudley, W. N., Wang, D. T., Wasserman, J., Eichler, M., Belcher, L.,

West-Edwards, C. (2001). Measurement of parenting self-efficacy and outcome expectancy related to discussions about sex. *Journal of Nursing Measurement*, 9(2), 135-149.

Donoghue, G. D. (2000). Women's health: A catalyst for reform of medical education. *Academic Medicine*, 75(11), 1056-1060.

Duffy, L. (2005). Culture and context of HIV prevention in rural Zimbabwe: The influence of gender inequality. *Journal of Transcultural Nursing*, 16(1), 23-31.

Dunkle, K. L., Jewkes, R. K., Brown, H. C., McIntyre, J. A. & Harlow, S. D. (2004).

Gender-based violence, relationship power and the risk of HIV infection in women attending antenatal clinics in South Africa. *The Lancet*, 363, 1415-1421.

Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin*, 111, 455-474.

- Friedlander, M. L., & Snyder, J. (1983). Trainees' expectation for the supervisory process: Testing a developmental model. *Counseling Education and Supervision*, 22, 342-348.
- Gagne, R. M., & Driscoll, M. P. (1988). Essentials of learning and instruction. Englewood Cliffs, NJ: Prentice-Hall.
- Gallup, 2006. Retrieved from <http://www.gallup.com/poll/25888/Nurses-Top-List-Most-Honest-Ethical-Professions.aspx>
- Garcia, Balderamos, D. (2000). Keynote address at the National AIDS Commission in Belize, C. A.
- Gibney, L., Saquib, N., & Metzger, J. (2003). Behavioral risk factors for STD/HIV transmission in Bangladesh's trucking industry. *Social Science & Medicine*, 56(7), 1411-1424.
- Gott, M., Galena, E., Hinchliff, S., & Elford, H. (2004). "Opening a can of worms": GP and practice nurse barriers to talking about sexual health in primary care. *Family Practice*, 21(5), 528-536.
- Harvey S. M., Bird S. T., Galavotti C., Duncan E. A., & Greenberg, D. (2002). Relationship power, decision-making and condom use among women at risk for HIV/STDS. *Women & Health*, 36(4), 69-84.
- Hayes, E. F. (1998). Mentoring and nurse practitioner student self-efficacy. *Western Journal of Nursing Research*, 20(5), 521-535.
- History of Belize. U. S. State Department July 2007. Retrieved from <http://historyofnations.net/northamerica/belize.html>

- Institute of Medicine. (2007). PEPFAR Implementation: Progress and Promise.
Retrieved from <http://www.iom.edu/Reports/2007/PEPFAR-Implementation-Progress-and-Promise.aspx>
- International Women's Rights Action Watch. Retrieved from <http://www.1umn.edu/humanrts/iwraw/belize.htm>
- Iyo, J., Mendoza, P., Cardona, J., Cansino, A., & David, R. (2003). Country Experience in Land Issues: Belize. United States Agency for International Development.
Retrieved at http://www.usaid.gov/pdf_docs/PNADC364.pdf
- Kari Consultants (2002). Poverty Assessment Report-Belize. Executive Summary.
Citizen empowerment: A developmental perspective. Prevention in human services 3, 9-36. Retrieved from <http://www.belize1.com/Bzlibrary/trust466.html>
- Karim, F., Tripura, A., Gani, M. S., & Chowdhury, A. M. (2006). Poverty status and health equity: evidence from rural Bangladesh. *Public Health, 120*(3), 193-205.
- Kernis, M. H., & Goldman, B. M. (2005). Authenticity, social motivation, and Psychological. K.D.Williams (Eds.), *Social motivation: Conscious and unconscious processes*, 210-227. New York: Cambridge University Press.
- Knapp, T. K. (1998). Quantitative nursing research. Thousand Oaks, CA: SAGE Publications, Inc.
- Laschinger, H. K. S. (1996). Undergraduate nursing students' health promotion counseling self-efficacy. *Journal of Advanced Nursing, 24*, 36-41.

- Maharaj, P., & Cleland, J. (2005). Risk perception and condom use among married or cohabitating couples in KwaZulu-Natal, South Africa. *International Family Planning Perspectives, 31*(1), 24-29.
- McClaurin, I. (1996). *Women of Belize*. New Brunswick, NJ: Rutgers University Press.
- Morris, C. N., Morris, S. R., & Ferguson, A. G. (2009). Sexual behavior of female sex workers and access to condoms in Kenya and Uganda on the Trans-African Highway. *AIDS & Behavior, 13*(5), 860-865.
- Morse, J. M., & Field, P. A. (1995). *Qualitative research methods for health professionals, 2nd Edition*: Thousand Oaks, CA: SAGE Publications.
- Nash, W. (2008, February). Sexual relationship power in Belizean women: Psychometric evaluation of the Sexual Relationship Power Scale. Poster session At the annual meeting of the Southern Nursing Research Society, Birmingham, AL.
- National AIDS Commission. (1999). *National strategic plan 2000-2003*. Belize. Retrieved from <http://www.nacbelize.org/dms20/dm>
- National AIDS Commission. (2005). *Strategic plan for a multi-sectoral national response to HIV/AIDS in Belize 2006-2011*. Belize. Retrieved from <http://www.nacbelize.org/dms20/dm>
- National AIDS Commission (2007). *Fourth Quarter Report*. Retrieved from <http://www.nacbelize.org/dms20/dm>

National Report: Belize. Inter-American Commission of Women. August 2006.

Retrieved from <http://oas.org/cim/XXXIII%20Asamblea%20de%20Delegadas/CIM-doc.19.Belize.ing.doc>

Neff, K. D., & Suizzo, M. (2006). Culture, power, authenticity and psychological well-being within romantic relationships: A comparison of European American and Mexican Americans. *Cognitive Development, 21*, 441-457.

Nunnally, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Ozer, E. M., Adams, S. H., Gardner, L. R., Mailloux, D. E., Wibbelsman, & C. J., Irwin, C. E., Jr. (2004). Provider self-efficacy and the screening of adolescents for risky health behaviors. *Journal of Adolescent Health, 35*(2), 101-7.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(4), 543-578.

PEPFAR. The U.S. President's Emergency Plan for AIDS Relief. Retrieved from: <http://www.PEPFAR.gov/about1129117.htm>

Pettifor, A. E., Measham, D. M., Rees, H. V., & Padian, N. S. (2004). Sexual power and HIV risk in South Africa. *Emerging Infectious Disease, 10*(11), 1996-2004.

Pulerwitz, J., Amaro, H., DeJong, H., Gortmaker, S. L., & Rudd, R. (2002). Relationship power, condom use and HIV risk among women in the USA. *AIDS Care, 14*(6), 789-800.

Quinn, T. C., & Overbaugh, J. (2005). HIV/AIDS in women: an expanding epidemic. *Science, 308*(5728), 1582-1583.

- Rankin, B. H., & Aytac, I. (2008). Religiosity, the headscarf, and education in Turkey: An analysis of 1988 data and current implications. *British Journal of Sociology of Education, 29*(3), 273-287.
- Regional Conference on Women in Latin America and the Caribbean. Women's Department Ministry of Human Development, Belize. July 11, 2005.
- Riley, E. D., Gandhi, M., Hare, C., Cohen, J., & Hwang, S. (2007). Poverty, unstable housing, and HIV infection among women living in the United States. *Current HIV/AIDS Reports, 4*(4), 181-186.
- Risen, C. B. (1995). A guide to taking a sexual history. *Clinical Sex, 18*, 39–53.
- Rush, K. L., Kee, C. C., & Rice, M. (2005). Nurses as imperfect role models for health promotion. *Western Journal of Nursing, 27*(2), 166-183.
- Savitz, D. A., Kaufman, J. S., Dole, N., Siega-Riz, A. M., Thorp, J. M., & Kaczor, D. T. (2004). Poverty, education, and pregnancy outcome. *Ethnicity & Disease, 14*(3), 322-329.
- Shunk, D. H. 2003. Self-efficacy for reading and writing: Influence of modeling, goal-setting, and self-evaluation. *Reading and Writing Quarterly, 19*, 159-172.
- Sierpina, V., Kreitzer, M. J., & Stanley J. (2006). Innovations in integrative healthcare education: CAM elective at St. George's Medical School. *Explore: The Journal of Science & Healing, 2*(3), 269-270.
- Soet, J. E., Dudley, W. N., & Dilorio, C. (1999). The effects of ethnicity and perceived power on women's sexual behavior. *Psychology of Women Quarterly, 23*(4), 707-723.

- Soler H., Quadagno, D., Sly, D. F., Riehman, K. S., Eberstein, I. W., & Harrison DF. (2000). Relationship dynamics, ethnicity, and condom use among low-income women. *Family Planning Perspectives, 32*(2), 82-88, 101.
- Stansbury, J. P., & Sierra, M. (2004). Risks, stigma and Honduran Garifuna conceptions of HIV/AIDS. *Social Science and Medicine, 59*(3), 457-471.
- Stevens, J. (1996). Applied multivariate statistics for the social sciences. Mahwah, NJ: Lawrence Erlbaum Associates.
- Tang, M., Addison, K. D., LaSure-Bryant, D., Norman, R., O'Connell, W., & Stewart-Sicking, J.A. (2004). Factors that influence self-efficacy of counseling students: An exploratory study. *Counseling Education & Supervision, 44*, 70-80.
- Tao, G., Irwin, K. L., & Kassler, W. J. (2000). Missed opportunities to assess sexually transmitted diseases in U.S. adults during routine medical checkups. *American Journal of Preventive Medicine, 18*(2), 109-114.
- The Global Fund to Fight AIDS, Tuberculosis, and Malaria. Retrieved from <http://www.theglobalfund.org/programs/grant/?compid=1796&lang=en&countryid=belize>
- Tourigny, L. & Pulich, M. (2005). A critical examination of formal and informal mentoring among nurses. *The Health Care Manager, 24*(1), 68-76.
- Tresolini, C. P., & Stritter, F. T. (1994). An analysis of learning experiences contributing to medical students self-efficacy in conducting patient education for health promotion. *Teaching & Learning in Medicine, 6*, 247-254.

- Uebersax, J. S. (2006). Likert scales: Dispelling the confusion. *Statistical Methods for Rater Agreement* website. Retrieved from <http://ourworldcompuserve.com/homepages/jsuebersax/likert2.htm>
- UN-CEDAW-Belize. (2005). United Nations Committee on the Elimination of Discrimination Against Women combined 3rd & 4th periodic report-Belize. Retrieved from: www.daccess-ods.un.org/TMP492963.343858719.html
- UNAIDS. (2008). UNAIDS Report on the Global AIDS Epidemic. Retrieved from http://www.ifrc.org/docs/Appeals/annual08/Belizecountrysheet_FINA.pdf
- UNGASS. (2008). The United Nations General Assembly Special Sessions Country Report-Belize. Retrieved from http://data.unaids.org/pub/Report/2008/Belize_2008_country_progress_reporten.pdf
- van der Schee, E., Braun, B., Calnan, M., Schnee, M., & Groenewegen, P. P. (2007). Public trust in health care: A comparison of Germany, The Netherlands, and England and Wales. *Health Policy*, 81, 56-67.
- Vockell, E. Educational Psychology: A Practical Approach, on-line book. Retrieved from <http://education.calumet.purdue.edu/Vockell/EdPsyBook/index.html>
- Von dem Knesebeck, O., Verde, P. E., & Dragano, N. (2006). Education and health in 22 European countries. *Social Science & Medicine*, 63(5), 1344-1351.
- Wechsler H., Levine S., Idelson, R. K. (1996). The physician's role in health promotion revisited—a survey of primary care practitioners. *New England Journal of Medicine*, 334, 996–998.
- WIN. Women's Issue Network. <http://www.winbelize.org>

Wolf, M. S., Linsk, N. L., Mitchell, C. G., & Schechtman, B. (2004). HIV prevention in practice: An assessment of the public health response of physicians and nurses in the midwest. *Journal of Community Health, 29*(1), 63-73.

World Health Organization-Belize. Country Profile. Retrieved from: <http://www.who.int/countries/blz/en>

Appendix A

Sexual Behavior Efficacy Subscale of the Providers Attitude

Questionnaire

How comfortable are you that you can:	Not Confident At All						Extremely Confident				
	0	1	2	3	4	5	6	7	8	9	10
1) Ask teens about sexual behavior?											
2) Determine if a teen's behavior place's him or her at risk?											
3) Deliver brief messages that support positive behaviors of teens who are not sexually active?											
4) Deliver brief messages that support positive behaviors of sexually active teens who consistently use contraception and condoms with a regular partner?											
5) Deliver brief messages to teens who are engaging in risky sexual behavior involving inadequate condom or contraceptive use, multiple partners, etc.?											
6) Determine the most appropriate referrals needed for teens who are sexually active (e.g., STD checks, contraception)?											
7) Follow-up on referrals related to teens' sexual behavior?											

(Ozer, et al., 2004)

Appendix B

Modified Sexual Behavior Efficacy Subscale (in women)-

Provider's Attitude Questionnaire (MSBES(w)-PAQ)

Please check the box best describes your response to each of the following questions regarding the delivery of condom use information to women for the prevention of HIV/AIDS.

On a scale of 1 to 10 with 1 being not confident at all to 10 being extremely confident, how confident are you that you can do the following:	1	2	3	4	5	6	7	8	9	10
1. Ask women about their sexual behavior?										
2. Determine if a woman's behavior places her at risk?										
3. Deliver brief messages that support women who consistently use condoms to reduce their risk of contracting HIV?										
4. Deliver brief messages to women who <i>do not</i> consistently use condoms to reduce their risk of contracting HIV?										
5. Respond correctly to questions women may have about the correct use of condoms?										
6. Offer support to women in negotiating condom use in difficult situations (for example; reluctant partner, new partner, threat of abuse, under the influence of drugs or alcohol)?										

What do you think is the *most* influential reason why you may not talk to every woman about using condoms to reduce her risk of contracting HIV/AIDS through sexual transmission?

***This survey was modified from the Provider's Attitude Questionnaire**

Appendix C

Relationship Control Subscale of the Sexual Relationship Power Scale

(SRPS-RC)

Please check the box best describes your response to each of the following questions regarding your personal experience:	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
1. Most of the time, we do what my partner (boyfriend, spouse) wants to do.				
2. My partner won't let me wear certain things.				
3. When my partner and I are together, I'm pretty quiet.				
4. My partner has more say than I do about important decisions that affect us.				
5. My partner tells me who I can spend time with.				
6. I feel trapped or stuck in our relationship				
7. My partner does what he wants, even if I do not want him to.				
8. I am more committed to our relationship than my partner is.				
9. When my partner and I disagree, he gets his way most of the time				
10. My partner gets more out of our relationship than I do.				
11. My partner always wants to know where I am.				
12. My partner might be having sex with someone else.				

(Pulerwitz, et al., 2002)

Appendix D

VICARIOUS EXPERIENCE-CONDOM USE PROMOTION WITH WOMEN

VE-CUP(w)

Please check the box best describes your response to each of the following questions.	Never	Rarely	Sometimes	Often	Very Often
1. I have observed nurses/health care providers effectively promote and teach condom use to women to reduce the risk of HIV.					
2. I have observed nurses/health care providers effectively promote and teach condom use to women for any reason (i.e., contraception, STD prevention, etc.)					
3. After observing nurses/health care providers experience NO negative consequences when promoting and teaching condom use to women for HIV prevention (<i>patient becomes upset or angry, nurse not able to respond appropriately to questions</i>), I feel more willing to try to speak to women about this myself.					
4. In my experience as a nurse, I have had opportunities to observe nurses/health care providers speak effectively to women about difficult or uncomfortable topics/issues.					
5. I am able to identify role models in my practice who effectively promote and teach women about condom use for HIV prevention.					

Appendix E

Socio-demographic Data and HIV Education and Experience

Prior to completing this survey, please respond to the following items:

Are you female?

Yes No

Do you see female patients/clients over the age of ten where you work or volunteer?

Yes No

Are you currently in a heterosexual, sexually active relationship?

Yes No

If you responded YES to ALL of the above questions, please continue with this questionnaire.

If you responded NO, please STOP and return your packet

Thank you for your time and interest in this study.

Demographic Data:

1. How old are you? <21 yrs 21-30 yrs 31-40 yrs 41-50 yrs >50 yrs

2. What is your cultural group affiliation?

Garifuna Chinese Mayan Mestizo

White/European

Mexican Creole Other, please describe

3. Marital Status Single Married Divorced Long-term relationship
(common law union)

4. Religious affiliation _____

5. Total household income per year in Belize dollars _____

6. Your income per year in Belize dollars _____

7. Are you an LPN RN

8. Do you practice in an expanded role such as midwifery, nurse practitioner or CNS?
yes no
9. Highest level of education in nursing? 1 yr 2 yr 3 yr BSN MSN
 PhD
10. Name and location of school where you received your education in nursing _____
11. Year you graduated with your first degree in nursing _____
12. Type of facility currently employed clinic hospital nursing school
other _____
13. Years have you been in your present job? 1-2 yrs 3-4 yrs 5-10 yrs >10 yrs

Background of HIV Education & Experience:

Do you see women at risk of contracting HIV/AIDS from sexual exposure?	Yes	No
Did you receive HIV/AIDS prevention content in your formal education?		
Have you ever received information/education about HIV/AIDS that specifically addresses women and issues surrounding sexual transmission of the disease?		
Does your current employer offer continuing education on HIV/AIDS?		
In the past five years, have you cared for patients with HIV/AIDS as a diagnosis?		
Do you currently care for patients with HIV/AIDS as a diagnosis?		
Do you know someone personally who is currently living with HIV/AIDS?		
Do you know someone personally who has died from HIV/AIDS?		

When was the last formal HIV/AIDS educational program that you attended? 1-2yr 3-4yr >5yr
Where was it located _____

Appendix F



Nurses' Association of Belize

St. Joseph St. Francis, Marygrove Drive
Belize City, Belize P.O. Box 1573
Phone: 501-203-4075
E-mail: nab.nursesassociationofbelize@gmail.com

PRESIDENT Isabel Bennett MEdN, BScN, RN 621-5049 isabelbennett@gmail.com Caribbean Nurses Organization Assistant Treasurer
VICE PRESIDENT Shirley Stanwick RN 621-4973 shirleystanwick@gmail.com
TREASURER Carole Jackson RN, MN, M 621-5144 carolejackson@gmail.com
ASSISTANT TREASURER Felicie Spinks Flowers RN, M 621-9529 felicieflowers@gmail.com
SECRETARY Cathy Gilson RN 621-5199 cathygilson@gmail.com
ASSISTANT SECRETARY cathygilson@gmail.com
NURSE IN EXPANDED ROLE Ingrid Clark RN, PHN 621-2896 ingridclark@gmail.com
REGISTERED NURSE REP. Joan Robinson-Craig RN, M 607-4570 joanrobinsoncraig@gmail.com
PHYSICAL NURSE REP. Andrew Boyd RN 621-7165 andrewboyd1964@gmail.com

FROM: Ms. Isabel Bennett, President N.A.B

TO: Whitney Nash, Director
Kentucky Racing Health Services Center
Coordinator, Adult Nurse Practitioner Program
University of Louisville

DATE: Monday April 19th, 2009

CC: Mrs. Marjorie Parks, Deputy Director of Health Services (Nursing)
Mrs. Laura Longworth, C.N.O Regional Director 1

SUBJECT: Nursing Research Study to be conducted in Belize

Dear Mrs. Nash,

Congratulations on the approval of your study by Government of Belize, Ministry of Health, Bioethics Committee for you to conduct your nursing research study to *describe the relationship between a nurse's perceived sexual power in their primary sexual relationship and their self-efficacy to discuss condom use with women to reduce their risk of contracting HIV/AIDS* in Belize.

The abstract was reviewed and N.A.B has embraced your proposal as well.

Looking forward to assisting you in your study for 2009.

Sincerely,

Isabel Bennett
President, N.A.B

igb

Appendix G



MINISTRY OF HEALTH
3rd Floor, East Block Building
Belmopan, Belize, Central America
Phone: 501-822-2326/0809, Fax: 501-822-2942
E-mail: dhsmoh@yahoo.com

Ref: GEN/17/08(33)

22nd April, 2008

Ms. Whitney Nash
Director
Kentucky Racing Health Services Center
Coordinator, Adult Nurse Practitioner Program
University of Louisville

Dear Ms. Nash,

The abstract of the study you propose to conduct among Belizean Nurses to describe the relationship between a nurse's perceived sexual power ... has been reviewed by the Bioethics Committee of the Ministry of Health. I am pleased to inform you that permission is given for you to conduct the research study.

You are required to send the complete research proposal, detailing methodology to the Ministry of Health before proceeding to data collection.

I wish you success in procuring funding and look forward to working with you.

Sincerely,

MS. MARJORIE E. PARKS
Deputy Director of Health Services (Nursing)

Appendix H

Health Promotion Self-efficacy of Belizean Nurses: The Role of Power in the Prevention of HIV/AIDS in Women

You are invited to take part in a research study to determine if sexual relationship power and other variables among nurses affect their practice to provide information regarding safe sex practices, particularly condom use, to their female clients.

This study is being sponsored by the University of Louisville, School of Nursing. The study is being conducted under the direction of Whitney A. Nash, ANP-BC, MSN and Robert. V. Topp, RN, PhD. Approximately 75 practicing nurses will be invited to participate. You will be given a coupon for \$10.00 BZD off of next year's conference or a gift bag with pens, paper and other small items as compensation for your time and participation in this study.

There are no known risks for your participation in this research study. The information collected may not benefit you directly. The information learned in this study may be helpful to others. While the data are being collected in Belize, research records will be kept in a locked, transportable file cabinet. Completed files will be stored in a locked file cabinet in the research office in the University of Louisville, School of Nursing. Data that are entered into a computer for analysis will be password protected and encrypted.

In this study, you will be asked to complete four brief questionnaires, and answer some questions about your work as a nurse. You will also be asked questions about things such as your marital status and income. This will take approximately 15 minutes to complete. You do not have to answer any questions that may make you uncomfortable.

Individuals from University of Louisville School of Nursing, the Institutional Review Board (IRB), the Human Subjects Protection Program Office (HSPPO), and other regulatory agencies may inspect these records. In all other respects, however, the data will be held in confidence to the extent permitted by law. Should the data be published, your identity will not be disclosed.

Taking part in this study is voluntary. By completing this survey you agree to take part in this research study. You do not have to answer any questions that make you uncomfortable. You may choose not to take part at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop taking part at any time, you will not lose any benefits for which you may qualify.

If you have any questions, concerns, or complaints about the research study, please contact: Whitney A. Nash at 001-502-852-5366. If you have any questions about your rights as a research subject, you may call the Human Subjects Protection Program Office at 001-502- 852-5188. You can discuss any questions about your rights as a research subject, in private, with a member of the Institutional Review Board (IRB). You may also call this number if you have other questions about the research, and you cannot reach the research staff, or want to talk to someone else. The IRB is an independent committee made up of people from the University community, staff of the institutions, as well as people from the community not connected with these institutions. The IRB has reviewed this research study.

If you have questions about the study after the researcher has left Belize, you may contact Ms. Marjorie E. Parks, Deputy Director of Health Services (Nursing) with the Belize Ministry of Health at 501-822-2326/0809. Ms. Parks can facilitate your contact with the researcher to answer any questions or address concerns you may have.

If you have concerns or complaints about the research or research staff and you do not wish to give your name, you may call 001-877-852-1167. This is a 24 hour hot line answered by people who do not work at the University of Louisville.

Sincerely,

Whitney A. Nash, ANP-BC, MSN
001-502- 852-5825

Robert V. Topp, RN, PhD
001-502- 852-5825

CURRICULUM VITAE

Whitney A. Nash, MSN, RN, ANP-BC

1613 Reidinger Ridge

New Albany, IN 47150

(502) 852-5825 (office)

wanash01@louisville.edu

Education

- | | |
|--------------|---|
| 2005-present | Ph.D., Nursing (current student, anticipated completion, May 2010)
School of Nursing
University of Louisville, Louisville, KY |
| 1997 | M.S.N., Adult Nurse Practitioner
School of Nursing
University of Louisville, Louisville, KY |
| 1986 | B.S.N.
School of Nursing
Indiana University, Bloomington, IN |

Academic Appointments

- | | |
|--------------|---|
| 2009-present | Assistant Professor, Term
University of Louisville |
| 2005-2009 | Instructor, Term
University of Louisville |
| 1996-1997 | Instructor
School of Nursing
University of Louisville, Louisville, KY |

1992-1996 Instructor (full and part-time)
Nursing Department
Indiana Vocational Technical College, Sellersburg, IN

Other Employment

2003-2005 Nurse Practitioner
2001-2002 Health Essentials, Inc., Louisville, KY

2002-2003 Nurse Practitioner
Dartmouth-Hitchcock Clinic, Concord, NH

2000-2001 Territory Business Manager
Bristol-Myers Squibb, Plainsboro, NJ

1997-2000 Nurse Practitioner
Cypress Medical Associates, Clarksville, IN

1993-1995 DON/Clinical Coordinator
Medical Center of Southern Indiana, Charlestown, IN

1991-1993 Cardiac Rehab Coordinator
Clark Memorial Hospital, Jeffersonville, IN

1990-1991 Cardiac Research Coordinator
Division of Cardiology
University of Louisville, Louisville, KY

1987-1990 Emergency Room Nurse
Concord Hospital, Concord, NH

International Experience

Belize City, CA, Presentation and Data Collection at the Annual Nurses' Association of Belize, November 2009

San Jose, Costa Rica, CA, escort for New Albany High School Spanish Language International Program, March 2009

Managua, Nicaragua, CA, Hand in Hand Ministries Service Trip, January, 2009

Belize City & Belmopan, Belize, CA, Health Policy Practicum, University of Louisville, 2008

Gales Point and Red Bank, Belize, CA, International Service Learning Program, University of Louisville, 2006 and 2007

London, England & St. Petersburg, Russia, School of Nursing Health Care Systems
Course, University of Louisville, 1996

Health Care Systems in Russia and the United States: A Comparison. Presentation in St.
Petersburg, Russia, May 1996

National Certification and State License

Kentucky RN # 1064933
Kentucky ARNP # 2622P
Adult Nurse Practitioner ANCC

Professional Memberships and Activities

Sigma Theta Tau, Iota Zeta Chapter, Delegate-2007-09
Kentucky Coalition of Nurse Practitioners and Nurse Midwives
National Organization of Nurse Practitioner Faculties
Southern Nursing Research Association
National Nursing Centers Consortium
Nursing Centers Research Network
World Affairs Council of Louisville and Southern Indiana

Honors and Awards

Dean's Citation 2010
Lewis Scholar Award Recipient 2008-\$950.00 Award
Research Louisville Poster Competition Second Place 2007 \$300.00 Award
Presentation by 2007 Graduating Class for Community Service
Nominated as Faculty Favorite 2006-University of Louisville
Institute for Healthcare Improvement Scholarship 2006
Graduate Nursing Student of the Year (peer award) 1997
Dean's Award for Excellence in Nursing 1997
University of Louisville School of Nursing Scholarship 1996
Golden Key Honor Society
Phi Kappa Phi Honor Society

Committees and Services

University

International Affairs Task Force-Appointed 2009-present

School of Nursing

Research Committee 2008

Community Service

Nursing Corp, American Red Cross 2005-current
American Heart Association 1991-1993
Tri Kappa Service Organization 1997-2000
National Center for Missing and Exploited Children, web project

Teaching

Undergraduate

NURS 451-Synthesis of Complex Health, University of Louisville, 2007, 2006
NURS 470-Community Health Nursing, RN-BSN, University of Louisville, 2008, 2007, 2006
NURS 340-Community Nursing Clinical, University of Louisville, 2007, 2006, 2005, 1997, 1996
NURS 350-Medical-surgical Nursing Clinical, University of Louisville, 2006, 2005, 1997, 1996
NURS 440-Lifeskills for Nursing 3, maternal-child clinical, University of Louisville, 2005
NURS 450-Preceptor for Synthesis of Complex Health, 2007, 2006, 2005
PNU 129-Medical-surgical Nursing Didactic, Indiana Vocational Technical College, 1995, 1994, 1993, 1992
PNU 123-Pharmacology for Practical Nursing, Indiana Vocational Technical College, 1995, 1994, 1993, 1992
PNU 126-Anatomy and Physiology for Practical Nursing, Indiana Vocational Technical College, 1995, 1994, 1993, 1992
PNU 133-Care of the Older Adult, Indiana Vocational Technical College, 1995, 1994, 1993, 1992
NUR 250-Guest lecturer in Pathophysiology (diabetes and cardiovascular components), ASN program, Indiana Vocational Technical College, 1995 & 1994

Graduate

NURS 656-Advanced Health Assessment, 2009
NURS 654-Nursing Informatics, Course Coordinator, University of Louisville, 2008
PHPB 610-Introduction to Nursing Informatics, University of Louisville, 2008
NURS 624-Adult Nurse Practitioner Clinical I, University of Louisville, 2009, 2008, 2007
NURS 625-Adult Nurse Practitioner Clinical II, University of Louisville, 2010, 2009, 2008
PHPB 610-Introduction to Nursing Informatics, University of Louisville, 2008
Coordinator for the Adult Nurse Practitioner Program, University of Louisville, 2010, 2009, 2008, 2007

NURS666 -Geriatric Nurse Practitioner Clinical, University of Louisville, 2007, 2006

Abstracts and Presentations

Oral Presentations: Local/Regional Meetings

(Invited)

Nash, W. The Kentucky Racing Health Services Center: An Innovative Clinical Site The Anne Braden Institute for Social Justice Symposium: Social Justice and Engaged Scholarship. Louisville, KY, April 4, 2008.

(Community Service)

Nash, W. Waterborne Illness in Belize. Meeting of Engineers Without Borders, October 24, 2007.

(Invited)

Nash, W. Condom Use Among Young Women in Belize. Celebration of Research, Commission on the Status of Women, October 25, 2007.

(Invited)

Nash, W. Condom Use Among Young Women in Belize: Initial Data Analysis. Undergraduate Research Assembly. University of Louisville, October 1, 2007.

(Community Service)

Nash, W. Avian Flu: An Overview. Presentation to the Thoroughbred Chorus. Louisville, KY, June 22, 2006.

(Community Service)

Nash, W. Why Should I See a Nurse Practitioner? Meeting of the Louisville Singletons. Louisville, KY, June 9, 2006.

(Invited)

Nash, W. Women and Cardiovascular Disease. American Heart Association Regional Meeting, Jeffersonville, IN, May 1992.

Poster Presentations: Local/Regional Meetings

(Invited)

Nash, W., Hern, M., & Ridner, S. L. (2009). Perceptions and Feasibility of an Independent Academic Nurse Practitioner Practice Center. 3rd Annual Nurse Faculty/ Nurse Executive Summit. Scottsdale, Arizona, December, 3, 2009.

(Invited)

Nash, W., Topp, R. & Hutti, M. (2007). Sexual Relationship Power in Belizean Women: Psychometric Analysis of the Sexual Relationship Power Scale. Southern Nursing Research Association annual symposium. Birmingham, Alabama, February 22, 2008.

(Data Based)

McCurren, C., Nash, W., Lowe, J., Lush, M., Coleman, M., Barber, C., Harris, Y. & Mast, L. (2006). Interdisciplinary Practice Experience: A Quality Improvement Project. Institute for Healthcare Improvement. Dartmouth College, NH.

Grant Funding

Lilialyce Akers Award from the Committee on Women and Global Issues (2009) for \$1,000 for dissertation support, "Health Promotion Self-efficacy of Belizean Nurses: The Role of Sexual Relationship Power in HIV/AIDS Prevention.

Sigma Theta Tau, Iota Zeta Chapter Research Award (2009) for \$500.00.

Lewis Scholar Award, University of Louisville, Latin American Studies Department (2008) for \$950.00. Support used to complete health policy practicum.

Lilialyce Akers Award from the Committee on Women and Global Issues (2007) for \$750.00 for support of the pilot study "Condom Use Among Women in Belize.

Publications, Book Chapters, Monographs and Textbooks

Peer-reviewed

1. Nash, W. (2007). At the racetrack: An NP-managed clinic for "backside" workers. *Nurse Practitioner World News*, 12(8), 19-21.
2. Nash, W. (1994). Treating diphenhydramine overdose. *Nursing* 94, 24(6), 33.
3. Nash, W. (1994). Myths and facts about hypothermia. *Nursing* 94, 24(3), 27.
4. Singer, I., Austin, E., Nash, W., Gilbo, J. & Kupper-Smith, J. (1991). The initial experience with an implantable cardioverter/defibrillator/pacemaker. *Pace*, 14(7), 1119-28.

Non peer-reviewed

1. Hern, M. J., Nash, W., & S. L. Ridner (2009). Nurse practitioner center to open spring 2009. *The Womens' Center News*, 16(3), 1.
2. Nash, W. (1996). Nursing, another time, another place. *Kentucky Nurse*, 44(3), 37.

Reviewer

1. Stabb, S. & Hodges, L. (1996). *Essentials of Gerontological Nursing*. Philadelphia: Lippincott.

Clinical Practice

2005-present Director, Kentucky Racing Health Services Center
Opened clinical practice in 2005 as independent, nurse-practitioner practice. Currently provides over 2,00 annual visits to backside workers in the thoroughbred horse racing industry. Open 15 hours/week and provides full-range primary care services.