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TEACHING CHANGE:
A MIXED-METHOD STUDY OF INTERVENTIONS, RISK PERCEPTIONS,
AND BEHAVIOR CHANGE AMONG
THE GARIFUNA OF HONDURAS

A Dissertation in
Rural Sociology and Demography

by

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Abstract

Strategies to combat HIV/AIDS generally emphasize behavioral change models; theory-led health prevention programs are frequently based on cognitive-behavioral models that follow a set of linear stages to reach the proscribed behavior change. Although these models have shown great promise in increasing knowledge and awareness of the disease, they tend to fall short in their ability to heighten an individual’s risk perception and generate overall behavior change.

This study examined Honduras as a case-study, utilizing mixed-methodology to investigate HIV/AIDS educational interventions being implemented in this country. First, the nationally representative 2006 Honduran Demographic and Health Survey data were used in a multivariate regression to examine how demographic characteristics, women’s perceived ability to refuse sex, HIV/AIDS knowledge, and the source utilized by Hondurans to gather their HIV/AIDS information affect abstinence, fidelity, and condom use (ABCs), which is the UN’s minimum package for containing the spread of HIV/AIDS. The findings concurred with prior HIV/AIDS educational evaluations. In other words, these interventions, although they have had positive results in increasing HIV/AIDS preventive knowledge and to some degree the attitudes of the individuals being targeted for HIV/AIDS risk, have limited effects on risky HIV/AIDS behavior. For this sample, mass media interventions had no effect on behavior change, and social networks had both positive and negative effects on reducing HIV/AIDS risk behavior. The variables found to be consistent with HIV/AIDS risk reduction behavior (the ABCs) were the sociodemographic variables of education, age, and marital status, while interpersonal social networks had mixed effects.
The study then looked at a HIV/AIDS high risk group to see how the interventions were affecting their behavior, from whom they obtained their HIV/AIDS information and which sources they trusted, and their opinions concerning the reasons for high HIV/AIDS prevalence in their community. To investigate this aspect of the study, the Garifuna communities on the north shore of Honduras were selected because of their HIV/AIDS prevalence rate, which is estimated to be four times greater than that for the overall population of Honduras. This study was conducted during the summer of 2007 and included 17 interviews with Honduran development agency personnel and 12 focus groups in 6 Garifuna communities. Prior studies showed that HIV/AIDS knowledge has increased among the Garifuna, but risk perceptions remain low and behavior change lags behind.

Findings from the qualitative stage of this study suggest that even though the Garifuna may not follow the proscribed behavior change model that includes abstinence, fidelity, and condom use, individuals are adapting their sexual behavior to better protect themselves from the disease. They are now utilizing “Sexual Reconnaissance” to investigate the HIV/AIDS risk of potential partners, to avoid the ABCs.

Discrepancies were found in perceptions between the in-depth interviews of the development agency personnel implementing the HIV/AIDS interventions and the Garifunas’ reasoning about the high HIV/AIDS prevalence in their communities. The development agency personnel viewed the normative sexual behavior of the Garifuna as the reason for the high prevalence rates, while the Garifuna believed that outside influences were the reason. This discrepancy between the development agencies’ and Garifunas’ perceptions could be leading the Garifuna to distrust development agencies
and affect the efficacy of HIV/AIDS interventions. Understanding current trends in behavior change among at-risk populations—how individuals are actively attempting to protect themselves from HIV/AIDS, and the discrepancies in perceptions between the target at-risk group and the agencies implementing the interventions—will greatly inform health prevention programs among the Garifuna and help to increase the efficacy of future interventions.
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Chapter 1

Introduction

HIV/AIDS is a pervasive problem in some regions of Honduras; the Afro-Carib villages of the Garifuna on the north coast of Honduras carry the brunt of the HIV/AIDS epidemic in the country. The Garifuna have four times the national rate of HIV/AIDS, with more than 8.5% of adult Garifunas testing positive for HIV (Jackson, 2002). Some Honduran Ministry of Health officials have speculated that several Garifuna villages could possibly have prevalence rates as high as 20% of the adult population (Hegstrom, 1997).

Much of the Garifuna culture is conducive to the spread of HIV/AIDS due to social norms such as having multiple partners, frequenting sex workers, contracting elevated levels of sexually transmitted infections (STIs), and aversion to condom use (Family Health International, 2006). A survey conducted by Asociación Buen Pastor in five Garifuna communities showed that the Garifuna have significant knowledge of HIV/AIDS risk factors; however, they also report high incidences of multiple partners and STIs. Among this group, knowledge of HIV/AIDS risk has not translated into behavioral change (Garcia et al., 2000). Garifuna traditional beliefs make individuals apprehensive about taking part in sex education and condom use. Many Garifuna believe that HIV/AIDS is punishment for a lack of moral fiber, while others believe that HIV/AIDS is witchcraft-driven. The cultural practices of Garifuna society also encourage gender inequality, prohibiting many females from making their own sexual decisions (Stillwagon, 2000). HIV/AIDS in Honduras is considered a concentrated epidemic; specific populations have significantly higher HIV/AIDS prevalence rates than the rest of
the population. These populations are the Garifuna, men having sex with men, and commercial sex workers (Barber-Madden et al., 2008).

Development organizations have worked to lower HIV/AIDS incidence rates among these populations to prevent its further spread. The United Nation’s Global Fund alone has pledged $47 million through 2014 to combat HIV/AIDS, and it has been joined by numerous multi-lateral and bi-lateral organizations as well as local non-government organizations (NGOS) (Barber-Madden et al., 2008). These initiatives have utilized interpersonal communications through peer education and community health workers as well as mass media interventions, through radio-dramas and social marketing, to hopefully reduce the spread of the disease. However, it is not known which, if any, of these approaches could result in behavior change that would reduce HIV/AIDS infection rates.

Little research has been done to understand how perceptions of HIV/AIDS risk and behavior norms are constructed and passed between and among individuals. Communication is an important step in forming individual perceptions and in decision-making and can act as a barrier or a conduit to risky sexual behavior.

Public health HIV/AIDS prevention education theoretical models are built on individual or intrapersonal level health models, which argue that as individuals increase their knowledge they will choose to comply with the health behavior being promoted to reduce their risk (Glanz et al., 2002). In-depth interviews with development workers conducted by the researcher revealed that much of Honduran preventive education is based on the stages of change model, which argues that preventive education goes in stages until behavior change is achieved. Generally, all intrapersonal- or individual-level
model stages involve: (1) raising awareness of the problem, (2) increasing knowledge of ways to prevent the problem, (3) instilling a sense of the personal risk related to the problem, and (4) then the individual adapts the proscribed behavior that will lower their risk to this problem (Prochaska et al., 2002). Yet these models ignore the fact that many behavioral decisions are neither made rationally nor individually. Many decisions are made based on social norms and others result from being pressured into behavior decisions by people in their peer groups. Thus, in reality many decisions, especially situations that occur around sex, are not made rationally or without consideration of what other individuals will make of the decision.

A critical aspect that is left out of the discussion of these individualistic theoretical models is the source and perceived credibility of the information that the individual is receiving. It is assumed that the individual will take information and then assess and utilize it to make a rational decision to change their behavior to reduce their risk without questioning the credibility of the source or deciding how to handle conflicting information. Information does not come without social contexts—an understanding of this is needed to have a better way to predict behavior change.

Social network theory helps to provide the contexts for the information passed to the individual by understanding the norms that may be surrounding socially awkward subjects, such as sexuality. Sexuality practices follow many social norms, including status and hierarchy—aspects that need to be understood before one can understand how information will be perceived and assessed. In the case of HIV/AIDS, such practices can “correctly or incorrectly shape the individual’s risk perceptions of what risky behavior is conducive to contracting HIV/AIDS and help guide the individual in partner selection”.
(Montgomery & Casterline, 1996). To understand how information is being perceived by individuals in relation to HIV/AIDS behavior, it is not only important to have a theoretical model to use in mapping out how behavior will hopefully change, but one needs to understand how the information is being utilized to make these decisions. Social network theory can help better understand how people perceive this information.

Honduras leads Central America in the number of cases of HIV/AIDS (Barber-Madden et al., 2008); however, very little is known about how the HIV/AIDS epidemic started. One of the goals of this study was to fill in the gaps in this information for Honduras by obtaining a baseline on the beliefs, norms, social networks, and demographics that drive the behavior of Hondurans. This research utilized the disciplines of public health, sociology, and demography to develop a better understanding of the Garifuna’s knowledge and beliefs about HIV/AIDS, and to gain a better comprehension of how knowledge and perceptions are formed by communication in interpersonal social networks as well as through deliberately formed mass media campaigns.

**Research Questions**

1. How do demographic characteristics, attitudes towards sex, and the source of HIV/AIDS information affect sexual behaviors (abstinence, fidelity, and condom use) associated with HIV/AIDS transmission?

2. What type of HIV/AIDS information do Garifuna obtain and utilize through educational interventions from mass media and social networks and how does it affect risky behavior related to HIV/AIDS?

3. What are the perceptions from the development organization personnel and the Garifuna as to the cause of high HIV/AIDS prevalence rates among the Garifuna?
To address each of these questions, multiple data sources were used; these are listed below.

For question one, I utilized the 2005–6 Honduran Demographic and Health Survey, to analyze how demographic characteristics, HIV/AIDS knowledge, social norms and source of HIV/AIDS information were associated with sexual behavior changes in women.

For questions two and three, I collected and analyzed qualitative data through key informant interviews and Garifuna focus groups as well as a focus group survey in the summer of 2007.

While quantitative analyses of the HDHS provide information on the sexual behaviors of a representative sample of Honduran women aged 15–19, it is not disaggregated to capture the attitudes and behaviors of the Garifuna population, necessitating a qualitative component to this study with the Garifuna. Green, Caracelli and Graham (1989) argued that mixed methodology can generate richer data than quantitative or qualitative data alone because it utilizes multiple instruments that can verify data consistency and clarify results. The qualitative in-depth interviews indicate whether the HIV/AIDS behavior shown in the general population is similar to the sexual behavior practiced by the Garifuna.

Mixed methodology can also generate new research questions or take the research in new directions not originally contemplated by the researcher (Greene et al., 1989b). The results from the HDHS study guided the research questions for the in-depth interviews and focus groups; conversely, the qualitative research also produced new research questions.
Chapter two looks at the past ethnographic research on the Garifuna, as well as the research behind the United Nations ABC HIV/AIDS prevention program (Abstinence, Be Faithful, Condom Use) which has been implemented in Honduras. Furthermore, it delves into the different HIV/AIDS communication programs (interpersonal and mass communication interventions) that have been utilized to convey the program message of the ABCs.

Chapter three takes an in-depth look at the Stages of Change Theoretical Model, which is the model identified by most development agents during in-depth interviews as guiding their HIV/AIDS intervention programs. This chapter provides an overview of this model, and shows the strengths and weaknesses of using it as a theoretical framework for HIV/AIDS educational interventions. Then, we move to an examination of the sociological model of social network theory to better understand how information provided by HIV/AIDS prevention programs is perceived by individuals, as well as how personal risk is defined on the individual level.

Chapter four describes the quantitative methodology used in operationalizing the 2005–6 Honduran Demographic and Health Survey. The variables used to understand what affects HIV/AIDS ABC prevention behavior are sociodemographics, the source of HIV/AIDS information, women’s perceived ability to refuse sex, and having prior knowledge of an ABC prevention behavior. Chapter five provides the results of a bivariate and multivariate logistic regression on Honduran women’s behavior to the UN guidelines of the ABCs, while looking at how demographics, sources of HIV/AIDS information, HIV/AIDS knowledge, and women’s perceived ability to refuse sex affect these behaviors.
Chapter six explains the methodology used in in-depth interviews with development workers engaged in HIV/AIDS prevention activities in Honduras and with Garifuna focus groups during the summer of 2007. Chapter seven shows the results of a short survey given to the Garifuna focus groups, designed to gain an understanding of which sources of HIV/AIDS information they utilize on a regular basis and how these sources affect their risk perceptions.

Using information gathered during interviews with development workers in Honduras and Garifuna focus groups, chapter eight contrasts their perceptions of why HIV/AIDS prevalence is so high in Garifuna communities compared to the rest of Honduras. Chapter nine explores the HIV/AIDS information sources used by the Garifuna and their assessment of credible information sources, and identification of those utilized regularly. Chapter ten looks at the ways the Garifuna have changed their behavior to reduce their risk since becoming aware of HIV/AIDS.

Finally, chapter eleven identifies the main conclusions of the study as well as the research, theoretical, and policy implications.
Chapter 2
Background on the Study

This chapter looks at research and offers additional background information on four aspects of the HIV/AIDS problem among the Garifuna, and the Honduran and international responses to it. The first aspect is the history and ethnography of the Garifuna, including the Garifuna cultural identity, history of marginalization and immigration, and traditions relating to polygamy.

The second aspect addresses the scope and breadth of the HIV/AIDS infection in Honduras, especially among the Garifuna. This section looks at the problems that exacerbate the Garifuna HIV/AIDS problem and the progression of HIV/AIDS in the Garifuna community.

The third aspect is the United Nations ABC (Abstinence, Be Faithful, and Condom use) program on HIV/AIDS prevention. Program aspects reviewed here include its success in lowering HIV/AIDS prevalence and behavior change, especially in Uganda, criticisms, and potential expansions.

The fourth aspect is the communication programs that have been used as a medium to convey the ABC message to at-risk populations in the developing world. Communication strategies that have been utilized in the past with HIV/AIDS education and awareness programs include mass media, peer education, social marketing, and school-based education.
History and Background of the Garifuna

The history and identity of the Garifuna is complicated. Since the Garifunas’ arrival in the Caribbean, they have been a minority group trying to make a living. During their constant movement, the Garifuna have retained a common culture, language, and history to keep them united. Yet they are separated by national boundaries, making them accept identities from multiple nations, but they are equally a part of a “Caribbean” culture as well (England 2006). Garifunas do not identify with one culture, but draw upon their multiple cultures, of African and Carib descent, as well as American, Belizean, Honduran, Guatemalan, and Nicaraguan nationalities. And in all national affiliations, they suffer discrimination. Although turmoil and migration are constants in their lives, the Garifuna have still been able to create a form of community that allows them to surpass national borders.

The History of the Garifuna

The Garifuna story begins in West Africa with the Diaspora, with slaves shipped to the new world as a source of labor. The Garifuna’s African ancestors arrived at St. Vincent in the Caribbean in the late sixteenth century; by 1612 many of the runaway slaves intermarried with the Carib Indians (or Red Carib) of St. Vincent to create the Garifuna (or Black Carib), with whom modern-day Garifuna identify. The Black Carib, or Garifuna, community continued to increase through population growth and augmentation (freed slaves from plantations in St. Vincent and wrecked slave ships). The number grew to the point that they became a political force with which to be reckoned. These “Black Carib” and “Red Carib” joined forces to battle the French colonialists,

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1 It is important to note that the Garifuna self-identify with both their African and Carib Indian ancestry and not just their African ancestry.
which, due to the continued rapid population growth of the Garifuna and St. Vincent natives, forced the French colonialists to request peace. The French colonists lived in relative peace with them thereafter (England, 2006).

However, St. Vincent did not stay in French hands for long; the British became interested in it and it was ceded to the British through the 1763 Treaty of Paris, officially ending Carib control of the island. Attempts by the British to convince the Caribs to sell their land failed and military action began in 1772 until the French-Carib alliance ultimately was defeated in 1796. The French were deported to Guadalupe, the Red Carib remained in St. Vincent, and the 2,000 Garifuna were deported to Roatan, an island just off the north coast of Honduras (Gonzalez, 1988).

The Garifuna did not remain on Roatan. Soon they left the island for Trujillo to settle on the virtually unpopulated north coast of Honduras, which had recently been cleared of indigenous populations by the Spaniards (England 2006). Conveniently for the Garifuna, the land was also vacant of the Spanish due to their lack of interest in the land at that time. The north coast was far from colonial centers and considered a dangerous area for roving pirates and indigenous raiding parties (Naylor, 1986; Newson, 1986).

The Garifuna continued to engage in their main economic activity—fishing—but supplemented it by also engaging in agricultural trade with the Spanish. In time, due to population increases and new economic opportunities, the Garifuna eventually spread east toward Mosquita, reaching as far as Bluefields, Nicaragua, and headed west, to southern Belize, but always staying close to the shore. Because of the Garifuna’s history of exile, the villages that they established were purposely isolated, to stay out of the way of Spanish colonists (England 2006).
Cultural Aspects of Garifuna

Today in Honduras, there are 43 Garifuna villages which, according to the CIA Factbook, make up about 2% of the Honduran population, or 139,000 people (CIA Factbook, 2007). These rural villages, along the north coast of Honduras, contain 80% of the Garifuna population (Seelke, 2008). On the north coast, the Garifuna continued to engage in their main livelihood and the traditional gendered division of labor learned on St. Vincent (Davidson, 1974). According to these traditional gender roles, males constantly moved around for conflict over land, fishing and trade, as well as to visit their multiple wives which they kept in many villages. Women, on the other hand, were farmers and caretakers, which lessened their mobility by requiring them to remain in their village (Helms, 1981).

Many researchers have argued that Garifuna culture is structured around Garifuna males having lengthy absences, which continues the trading patterns of Caribs on St. Vincent. This cultural practice has continued into the modern age, and into the Garifunas’ transnational migration which began in the 1950s (Gonzalez, 1987; Helms, 1981; Kerns, 1983). Although the Garifuna could have sustained their basic needs through their immediate environment, their demand for Western consumer goods necessitates men to become a migratory work force, shaping their society (Beaucage, 1970).

Some believe that the Garifuna society adopted a matriarch-focused system for families, in which women tended to be the household head (Kerns, 1983). However, other scholars have found that women tended to be the household head in name only—in other words, since the men were largely absent, they served as the de facto head only until the males returned (Gonzalez, 1988). Kerns (1983) believed that this system of
female-headed households stemmed from polygamous practices on St. Vincent and “female serial monogamy”. Compared to Latino marriages, many Garifuna marriages are viewed as polygamous. However, England believed that although Latinos are legally wed to only one woman, many also have multiple mistresses who, in comparison to Garifuna women, have “lower status, illegitimate children, and few rights.” Garifuna women, who may be in an openly “polygamous” relationship have, “more rights to their male counterparts’ resources and their children are socially accepted, to the point where Garifuna ‘stepchildren’ consider themselves legitimate siblings” (England, 2006, p.72).

The Garifuna language is a reflection of their collective heritage. The language is a derivative of several African and Carib dialects, with many words borrowed from English, Spanish and French (Garinet, 1999). The Garifuna language never had a written component until the early 1980s, when an evangelical movement in Honduras produced the first written adaptation of the Garifuna language in a fully translated bible (Johnson, 2007). In fact, there is currently a movement to introduce the Garifuna language into the public school system for Garifuna children, who are taught in Spanish, for fear that the Garifuna language may die out.

**The Economic Necessity for Migration**

For males in the Garifuna community, immigration has begun to serve as “a rite of passage to many and an economic necessity for most” (England, 2006, p. 2). Culturally, the migration of Garifuna males has been the cultural norm for 400 years, coming from their Carib Indian heritage regarding division of labor. In fact, studies have shown that for most of the Garifuna history, labor migration was not motivated by
poverty, but rather was used as a means of obtaining goods to supplement a subsistence economy (England, 2006).

The migration of the Garifuna to the U.S. began in the 1940s, with its entrance into World War II. The decrease in manpower due to the war and the Garifunas’ long experience in working at sea made the Merchant Marines a profitable niche for the Garifuna. Although the Merchant Marines required the Garifuna males to be away from their homes for long periods of time, many felt the opportunity to earn higher wages to send home, pensions, U.S. citizenship and job security via unionization were worth the sacrifice. However, applications to the Merchant Marines were time-consuming and had to be filed in New York City, thus setting up the first Garifuna enclave there (Miller-Matthei & Smith, 1996).

During the 1950s and 1960s, Garifuna immigration to the U.S. increased because plantations no longer needed Garifuna manpower, forcing the Garifuna to work for the fishing industry on the Bay Islands, the service industry and factories in cities, or immigrate to the U.S. (Beaucage 1970). During the 1960s, female Garifuna were attracted to the U.S. due to domestic need for nannies and housekeepers; unlike Garifuna males, Garifuna females brought their children and other family members with them (Kerns, 1992).

By the 1970s some of the first male immigrants to the U.S. had begun to retire in Honduras, after purchasing land and building comfortable houses to live in while they enjoyed their retirement pensions. These men’s image of upward mobility inspired other village males to immigrate to the U.S. (Gonzalez, 1988). Ethnographers in the 1970s began referring to Garifuna villages as “nurseries and nursing homes”, because so many
of the male working-age population had left to seek economic opportunity elsewhere (Gonzalez, 1987; Kerns, 1983).

By the 1980s and 1990s, migration was much more an act of economic necessity, with Honduras having high unemployment and increased cost-of-living. By 1989, unemployment was at 40%, increasing to 50–60% by 1993 (Merrill, 1993). In the 1980s, the Garifuna had a hard time finding work in New York City. By the 1980s and 1990s, these new Garifuna immigrants were considered working poor in the U.S. (England, 2006).

The Garifuna, who can pass themselves off as African-American, have an easier time entering the U.S. and avoiding deportation than Latinos. Thus they continue to have a flourishing immigrant enclave in the U.S. Because of the Garifunas’ relative ease in entering and leaving U.S. borders, many continue to seek employment in enclaves, such as New York City and Los Angeles, but often return home to see family and often foster their children out to relatives, to raise their children cheaply.

**Discrimination and Race**

In a recent survey of Garifuna living in New York City, England asked participants to indicate the ethnicity box they checked on the U.S. Census. She found that 41% marked African-American/Black; 38%, Hispanic; 16%, Other, writing in Garifuna; and 5%, Other, writing in Afro-Hispanic (England, 2006, p. 207). This shows that the Garifuna come from a mixed ethnic and racial background that often does not fit standard U.S. race and ethnic categories. Some claim that Garifuna is a single ethnic “nation,” unified by their common language, culture, and origin in St. Vincent as a unifying “homeland”. Others identify themselves as part of the “Garifuna nation of Diaspora” (England, 2006, p. 190) while others claim that “blackness is a global identity” (England,
2006, p. 190). This concept of blackness especially had a genesis in the 1980s, when closer ties with Africa were revitalized via the Garifuna bringing hip-hop and African-patterned clothing and “black” movies home with them to Honduras (Johnson, 2007).


The Garifuna are marginalized by a set of social practices and policies that often exclude them from political and economic power in the state. As England noted:

There is a dominant stereotype in Honduras of the Garifuna as fun-loving blacks who only dance punta, drink guaro, and make babies. A stereotype that has been used to justify their general exclusion from economic development plans except as service workers and tourist attractions (England, 2006, p. 5).

Much of the racial tension that exists today has its roots in the 1930s, with the Honduran government’s push to promote Honduras as a “mestizo nation” with few to no racial or cultural differences. Ergo, if there is no diversity within the nation, there can be no racial discrimination. The fact that many indigenous people and the Garifuna contradict this belief, has been a point of contention with the Honduran government and has affected its ability to pass policies that discriminate against these minorities (Euraque, 2003).

**Garifuna and Poverty**

A report by the Inter-American Commission on Human Rights concurs with the Garifuna claims of discrimination. In a 2004 report, it declared that despite gestures by the Honduran government to recognize the importance of Afro-Honduran culture,
“Racism continues in Honduras as much as by acts of commission as acts of omission, in the sense that the Honduran officials either deny its existence or merely pay lip service to its eradication, but take no concrete action” (Diene, 2004, p. 228).

The Inter-American Commission on Human Rights found that in Latin America, among indigenous groups such as the Garifuna, discrimination was prevalent, based on the following points brought forth by Diene (2004):

1. A correspondence between the map of poverty and the geographic distribution of indigenous and afro-descent communities.
2. The marginal participation of these populations in the structure of power (government, parliament, judiciary) and their scarce presence in the structures of the media.
3. The folkloric images of them that is projected by the means of information diffusion.

The Pan-American Health Organization agreed with these findings and added that:

The persistent gap in health disparities for Afro-descendants and the general population of Latin America come, at least in part, from racial discrimination. This discrimination comes in the form of minorities’ lack of access to services and reduced quality of information and services provided to them. It also acts directly in limiting of the type of jobs, living conditions, and educational opportunities available to them (Seelke, 2008, p. 13).

The limitations forced on the Garifuna via discrimination have not stopped them from organizing to fight these discriminations. They have also been aided by the Internet and telecommunications, allowing them to organize over great distances and create web sites to not only keep them updated and connect them with other Garifuna worldwide, but to preserve their unique history and language through web sites such as Garinet and Garifuna.com and begin such online organizations as the World Garifuna Organization.
Scope and Breadth of the Problem

Estimates of HIV/AIDS prevalence in Honduras reveal that the rate peaked at 1.92% in 1999 (UNAIDS, 2000) and decreased to 0.7% in 2008 (UNAIDS, 2008). However, because most Hondurans do not know their HIV status (UNAIDS, 2004b), the data are only an estimate. What is known is that HIV/AIDS is the second leading cause of hospitalization and death in Honduras, and the leading cause of death among Honduran women of childbearing age since 1997 (UNAIDS, 2004b). Honduras accounts for 17% of the population of Central America and 60% of the HIV/AIDS cases reported in the region (USAID, 2005). Among those who are HIV positive, 85% are aged 15–49, the most economically active age group. The male-to-female ratio is 1:1, indicating a growing feminization of the epidemic and suggesting that transmission is predominantly heterosexual (UNAIDS, 2008).

Previous research on the Garifuna community has found that HIV/AIDS rates are not directly linked to a lack of HIV/AIDS knowledge. In fact, in a survey of Knowledge, Attitude, Beliefs, and Practice (KABP), among five Garifuna villages in 2000, 90% demonstrated knowledge of sexual transmission risk factors (by far the greatest reason for Garifuna transmission). Among sexually active males, 33% reported having more than one sexual partner in the last year, as did 3% of sexually active women. Similarly, 30% of men and 5% of women reported having had a sexually transmitted infection (Garcia et al., 2000). Kendall (1995) surmised that this “KABP-gap” was due to a fatalistic perception that has been structured to cope with constant risk on a day-to-day basis; some sources of risk may not be questioned because they are common. This fatalistic approach may have been adopted by the Garifuna in light of the stressors in their environment,
including poverty, crime, and violence, which make them more capable of downplaying the risk of contracting HIV/AIDS (Stanbury & Sierra, 2004).

Migration is a significant factor in the global epidemic of HIV/AIDS, and Honduras is no exception (Lurie et al., 1995; Lurie et al., 2003b). A large proportion of the Garifuna population, about 20%, financially relies on remittances, usually from the U.S. (Garcia et al., 2000). Young Garifuna men, who are economically peripheralized members of an ethnic minority, are often forced to migrate out of their community to support loved ones at home. Garifuna men who are away from loved ones, impoverished, and stigmatized by their race and economic status, often succumb to the lure of commercial sex workers, multiple partners, and drugs to pass their time away from home. Upon returning home, they pass any infections on to their wives and other partners. Women often become infected with HIV/AIDS, furthering the high risk of mother-to-child transmission (Stanbury & Sierra, 2004).

The Honduran government and international community have dedicated resources to monitoring the Garifuna HIV/AIDS rate and to increasing knowledge of how it is transmitted and prevented. For the most part they have made great strides in increasing knowledge, but not managed to change risk perceptions nor modify behavior (COMCAVI, 2006).

The History and Future of the United Nations ABC Prevention Policy

The prevention strategy most frequently used with the Garifuna is based on the United Nations HIV/AIDS Strategy simplistically labeled the “ABC” strategy. Pulling this acronym apart, the “A” is for increasing and sustaining abstinence, “B” is for being faithful or increasing fidelity and decreasing multiple partners, and the “C” is for
increasing correct and consistent condom use. Expanding on the ABC, each of the three levels of the ABC program interacts with the others; in end, the combination is stronger than the sum of its parts.

This section looks at the history of how the ABC strategy was formed, its perceived strengths and weaknesses, its successes in HIV/AIDS prevention, and its possible future.

The Ugandan ABC Prevention Story

People in Uganda were among the first in Africa to be recognized as being afflicted with HIV/AIDS in 1982. Many believe that HIV/AIDS prevalence was increased by Uganda’s instability due to war, which allowed soldiers to indiscriminately rape, and led large refugee populations to mix who otherwise probably would not have done so (Okware et al., 2005).

As the war drew to a conclusion, Uganda was forced to recognize its enormous HIV/AIDS problem. Uganda began to implement programs to reduce the impact of HIV/AIDS and became not only one of the most remarkable success stories in Africa, but in the world, by reducing its prevalence rates from 15% in 1992 to 5% in 2002 (UNAIDS, 2002). To gain a better understanding of the ABC program’s possible role in reducing the prevalence rate, one needs to provide more information on the ABC program, its goals, and how each component was implemented, as well as how each behavior reduced HIV/AIDS prevalence in Uganda and in other countries.

The ABC Breakdown

The ABC program concentrates on sexual transmission of HIV/AIDS, which is the major cause of infection worldwide (Halperin et al., 2004; Shelton, 2007). Many
development organizations see the ABC program as offering the minimum programming to stop the spread of HIV/AIDS (Okware et al., 2005).

**Abstinence.** Abstinence is promoted among younger people who have never had sex, encouraging them to delay initiation of sexual activity (primary abstinence) or stop sexual activity after initiation (secondary abstinence). Research findings in Uganda have shown that lowering the age of sexual debut highly correlates with the spread of HIV/AIDS in young women; abstinence protected women in secondary school from contracting HIV/AIDS (Schoepf, 2003). In the 1990s, fewer young Ugandans were having sex than in the previous decade (Okware et al., 2005).

The WHO Global Program on AIDS reported that, according to findings from surveys conducted in 1988–89 and 1995 in Uganda, males aged 15–24 engaged in less premarital sex—decreasing from 60% in 1988 to 23% in 1995 (Green et al., 2006). Young Ugandan women, who have the greatest risk of contracting HIV/AIDS from older men (Kengeya-Kayondo et al., 1996), saw their median age at sexual debut rise between 1988 to 1995 from 15.9 to 16.3 (Cohen, 2003).

Despite these positive results for abstinence and the ardent backers of religious and socially conservative organizations (Boonstra, 2003), abstinence has negative aspects. Many researchers and policy makers have expressed deep concerns about abstinence-only programs—they do not feel that it is realistic to ask youth to stop having sex. Abstinence, like all other birth control methods, is not perfectly effective because there will be times when people are not able to sustain a record of perfect abstinence.
According to Dalliard (2003), 60% of college students who pledged abstinence until marriage during their middle or high school years had broken their vows before marriage. Furthermore, people who pledged abstinence until marriage were less likely to have vaginal sex, but just as likely as other non-pledges to engage in oral or anal sex.

Dalliard’s research showed that, up to the time of his study, no “abstinence only” education program had successfully delayed sexual activity. In fact, his research findings revealed that people who pledge abstinence until marriage delayed sex by only 18 months more than those who did not, and were more likely to not utilize contraception when they did engage in sexual activity.

**Be Faithful (Fidelity).** Fidelity entails practicing sex with just one partner in a long-term or lifelong relationship, such as marriage. However, for the purposes of reducing the spread of HIV/AIDS, fidelity only works after both partners in the relationship are determined to be HIV-free. Fidelity, for many people, may not be limited to one partner and may include polygamous marital relationships and serial monogamy. For the purpose of the ABC program, fidelity means not only staying in a monogamous relationship with one partner, but the overall reduction of multiple partners, which includes casual partners and sex workers.

Fidelity has been called the “forgotten middle child” of the ABC debate between social conservatives backing abstinence programs and liberal technocrats backing condom use (Shelton et al., 2004). However, when it comes to the decreased prevalence rate in Uganda, researchers have attributed most of the rate drop to the increase in Ugandans’ monogamous behavior (Cohen, 2004a; Epstein, 2004; Green, 2003; Hearst & Chen, 2004; Shelton et al., 2004; Stoneburner & Low-Beer, 2004; Wilson, 2004).
The WHO Global Program on AIDS reported that, according to surveys conducted between 1989 and 1995, casual sex rates dropped for people aged 15–24 from 35% to 15% for males and 16% to 6% for females (Green et al., 2006). Fidelity has had such a positive effect on reducing HIV/AIDS prevalence in Uganda that, according to Stoneburner and Low-Beer, if fidelity were a “social vaccine” it would have an 80% efficacy rate (Stoneburner & Low-Beer, 2004).

Ugandan women still had a fertility rate of 6.9 in 2005, which was the same fertility rate as in the late 1980s. However, since HIV/AIDS rates for Ugandan young women have dropped drastically in this same time period, Okware et al. (2005) believed that this shows that these women are still sexually active, but being sexually active in faithful monogamous relationships. Fidelity also has played an extensive role in either reducing HIV/AIDS prevalence rates or preventing HIV/AIDS from becoming a problem in many other countries, such as Cambodia, Zambia, Ethiopia, and the Dominican Republic (UNAIDS, 2002).

However, research has shown that the spread of HIV/AIDS may go beyond just having multiple partners, since much of the spread depends on time periods in which a person may be having sexual activity with two or more partners concurrently (Cohen, 2004b). Unlike serial monogamy, people who have concurrent partners increase their potential for infection rates by producing a large network in which people are not only connected to direct partners, but their partner’s partners within this network. Compared to serial monogamy, which traps the infection in a single partnership for long periods of time, concurrency can allow the virus to spread quickly (Epstein, 2004; Pilcher et al., 2008). In fact, researchers believe the high prevalence of HIV/AIDS in sub-Saharan
Africa is not due to Africans having more partners than is the case in Asia or western countries; rather, they are more likely to have ongoing simultaneous sexual relationships within a small cohort of sexual partners (Cohen, 2004a).

The evidence is strong for the promotion of fidelity in HIV/AIDS prevention; however, it has problems as well. First, fidelity is not an individualistic behavior, but depends on one’s partners’ fidelity—often the only confirmation of a partner’s fidelity is faith in one’s partner. Schoef (2003) reported that of the women who were HIV positive in Africa, 66% had transient husbands who sought economic opportunities elsewhere. Thus in Africa, the greatest source of risk for women in contracting HIV/AIDS is their husbands (Kengeya-Kayondo et al., 1996).

**Condom Use.** The ABC program emphasizes that condom use must be correct and consistent. Researchers have shown that consistent condom use lowers HIV transmission risk by 80–90% (Ahmed et al., 2001; Hearst & Chen, 2004; Holmes et al., 2004; UNAIDS, 2004a). As well, condom use reduces other STIs and instances of undesired pregnancies (Halperin et al., 2004).

There was an increase in condom use in Uganda between 1995 and 2000. For women in Uganda, condom use went up from 1 to 6% and condom use for men increased from 16 to 40% (Green et al., 2006). This increase came about despite religious opposition in Uganda (Allen & Heald, 2004).

Perhaps no other health behavior has as many urban myths linked to it as the condom. Many believe that condoms encourage infidelity (Mitchell et al., 2002), and that women who ask men to wear condoms are prostitutes or promiscuous (Schoepf, 2003). Beyond the mythology that surrounds condom use, more disturbingly, some research has
shown that condoms also may have a “disinhibiting effect” (Blum, 2004). Since individuals who use condoms decrease their probability of becoming infected with HIV/AIDS or other STIs, they believe that they only have to utilize condoms during sexual intercourse and do not have to adjust their behavior. However, condoms are never 100% effective, nor are they always used in every sexual encounter. Thus, this belief may offer false security and actually be increasing the spread of HIV/AIDS by causing young people to no longer fear infection (Blum, 2004).

**The Debate over the Ugandan Success**

The ABC program and its possible successes are not universally accepted by all researchers. Many have argued that the reduction in number of partners and maintenance of monogamy at the core of the Ugandan reduction of HIV/AIDS prevalence rests largely on ecological and observational evidence, as well as self-reporting behavior (Shelton et al., 2004). However, those researchers who do support partner reduction and monogamy as the major reasons for HIV/AIDS prevalence reduction in Uganda have argued that the overall argument seems logical and suggests that monogamy and partner reduction do seem to have a major effect on limiting the spread of this disease (Shelton et al., 2004).

Researchers who do not believe in the “fidelity theory” offer counter theories to explain decreased HIV/AIDS prevalence in Uganda, such as “an excess of mortality to the incidence rate of HIV infection” (Blum, 2004; Wawer et al., 1997) while others have considered the possibility of “the sub-type of the HIV/AIDS shift in the virus itself from the subtype of C to the A and D subtype, which is generally found to be less virulent” (Blum, 2004, p.430).
Others contend that the ABC program did not take on its own; rather, it occurred concurrently with a huge social mobilization of the Ugandan people from the presidential level, to religious and community organizations getting the word out about AIDS (Mukiza-Gaspere & Ntizzi, 1995). Some researchers have even suggested scrapping the ABC program in favor of structural programs based on handling gender inequality (Pulerwitz et al., 2002; Pulerwitz et al., 2000), economic development (Exner et al., 2003; Gupta, 2001), and migration issues (Hirsch et al., 2002; UNAIDS: International Organization for Migration, 2005), which are often the root causes of the spread of HIV/AIDS (Dworkin & Ehrardt, 2007).

The future of the ABC program hinges on its ability to change. With the increase of antiretroviral drugs on the market, behavior change is becoming a challenge since HIV/AIDS is increasingly being viewed as a chronic manageable disease (Cassell et al., 2006). Recently, due to religious and outside pressures, Uganda has changed its HIV/AIDS prevention campaign from strengthening fidelity to abstinence-only programs and the social marketing of condoms; since doing so, its incidence rate has also recently been climbing (Wilson & Halperin, 2008). Many researchers believe that there is a lack of evidence-based research to guide behavioral and structural interventions to curb the spread of HIV/AIDS. Bertozzi et al. (2006) emphasized the lack of evidence and contextual data to tailor specific interventions, terming it “reprehensible”, particularly in view of the significant resources invested in HIV/AIDS prevention efforts. UNAIDS (2007) has taken a “catch all” approach to the HIV/AIDS problem, now preferring a multifaceted approach, which includes behavioral, structural, and evidence-based research, and local ownership of the problem.
The Application of Health Communication to HIV/AIDS

Since HIV/AIDS was discovered in the early 1980s and the mechanisms on how it is spread have become better understood, civil society has tried to raise awareness of this threat and increase knowledge about its prevention. Unlike other communicable diseases, HIV/AIDS is not highly infectious and can only be passed through an exchange of bodily fluids, such as blood, semen, and vaginal secretions. Because no immunization is available for prevention, many have looked to a “social vaccine” of changing risky sexual behavior to curb the spread of HIV/AIDS and prevent vulnerable populations from contracting this disease.

Health education interventions have utilized many different techniques to increase knowledge, attitudes, and behavior change, such as school-based health and community-based educational initiatives taught by teachers, peers, and community health officials. Communication experts have also tried mass media interventions, such as radio and television, experimenting with drama/edu-entertainment, social marketing and public service announcements.

Even with the full force of all of these educational/communication techniques concentrated on this problem, solutions have born mixed fruit. Knowing about the problem does not necessarily equip individuals to combat the combined weight of social norms and history on which much sexual behavior relies. Rather, education has succeeded in specific areas while not being able to provide the much-needed end result of decreasing the spread of HIV/AIDS. Health education interventions have had an excellent record in increasing HIV/AIDS knowledge, but a mixed record in changing individual attitudes and very little difference in the actual health behavior changes.
Since the disclosure of the higher prevalence rates of HIV/AIDS in Garifuna communities, Honduras has launched a plethora of health education/communication interventions aimed at the Garifuna to curb and prevent the spread of HIV/AIDS infection on the north coast. These different programs have focused on both interactive educational programs, where the Garifuna receive health talks from a community health educator or within their school, to large mass media campaigns. In these two different education methods, the interactive programs center around school-based programs and peer education, while mass media programs center on radio drama and live-theatrical performances. I briefly discuss each of these programs in light of information received during my in-depth and focus group interviews about HIV/AIDS programs that were conducted in the Garifuna communities.

**Background on School-based HIV/AIDS Prevention**

Several studies have suggested that one important medium for helping students to learn about HIV/AIDS is the school system (Hyde et al., 2002; Jacob et al., 2006; Kelly, 2000). Schools are often chosen as a good place for HIV/AIDS educational interventions because for many developing nations, they are one of the few places regularly frequented by most youth, they are already structured to educate, and they are attended by youth before they have started engaging in sexual activity (Kirby et al., 2006).

Although school-based prevention programs have shown promise in increasing overall knowledge of HIV/AIDS and have had mixed success in changing some key behaviors for HIV prevention, sustainable sexual behavior change among young people has been elusive (Choi & Coates, 1994; Gallant & Maticka-Tyndale, 2004; Kaaya et al., 2002; Kirby et al., 2006; Klepp et al., 1994; Paul-Ebhohimhen et al., 2008). Some researchers believe that school-based educational interventions do not work because a
lack of teacher buy-in and/or experience with interactive programs at the schools. Gallent et al. (2004) found that teachers in developing nations often do not have the training or experience to be able to use interactive lesson plans and want to enforce strict discipline in their classroom, which interactive teaching methods can stray from if not utilized properly. Teachers also do not feel comfortable discussing sexual topics in class and could suffer censure from their school administration or community if they apply sex education in their curricula.

Even with all of the possible weaknesses for school-based education interventions, a meta-analysis conducted by Kirby, Obasi and Laris (2006) found in studying twenty-two school-based interventions that all had some positive aspects with regard to knowledge, attitudes, and behavior, and none saw an increase in negative aspects that have been proposed, like an increase in sexual activity among the students taking these classes compared to a control group. All twenty-two studies measured an increase in knowledge about HIV/AIDS and how it can be prevented. Of the nineteen studies that measured attitudes and risk perceptions, none negatively affected these factors; they were found to increase comfort in interpersonal communication and reduced the stigma of people living with HIV/AIDS. However, none showed any increase in perceived personal risk of HIV (Kirby et al., 2006).

Behavior change due to school-based programs has been mixed. Of the eight programs measuring secondary abstinence during a specified period of time; only three saw a decrease in the number of reported sexual partners. Of the fourteen studies that measured the impact of condom use, six found significant increases in condom use. However, none of these research findings from this meta-analysis of school-based
educational interventions can be called long term, since none of the interventions took measurements past six months of the intervention (Kirby et al., 2006).

**Peer Education**

The availability of educational interventions utilizing peer education has increased worldwide because they can be adapted to many different settings. Further, for educational programs to be trusted by the targeted population, it is better to have this information coming from a role model in their own cohort (Caron et al., 2004). For adolescents, there is theoretical evidence that they are more likely to adapt to the proposed behavior, if the person educating them to this model is similar to themselves in demographic characteristics, such as age, race, and sex (Bandura, 1986).

The real strength of a peer education program is that change is enacted on the individual level, yet there is also the potential for collective change through policy change and amending sexual norms. For these reasons, peer education programs are one of the most widely used programs used in curbing the HIV/AIDS pandemic (Horizons, 1999).

Research has found that early sexual debut is not an unplanned experience for many teens and peers are important in developing a sense of normative behavior (Kinsman et al., 1998) and condom use behavior is affected by peer support (Kirby, 2001). Evaluations of peer education programs have shown that participants experienced an increase in HIV/AIDS prevention knowledge, comfort in discussing sexual themes with others, and resistance to negative peer pressure (Wight, 1992). Results from peer education programs also show that the perception of how adolescent’s friends talked and perceived safe sex was a strong indicator in predicting safe sex (Haignere et al., 1997).
Studies have shown short-term shifts in attitudes toward abstinence as a healthy life choice (Caron et al., 1998), increased ability to refuse sex (Aarons et al., 2000), delays in sexual debut (Aarons et al., 2000), decreased frequency of sexual intercourse (Jemmott et al., 1998) and increased condom use (Smith et al. 2000). Smith et al. (2000) found that effective peer education programs tended to be theory-driven, well structured, and facilitated by exceptionally trained peer educators.

Mass Media
Since the discovery of HIV/AIDS in the early 1980s, mass media has been a largely used method in increasing awareness of the disease (Liskin, 1990; Myhre & Flora, 2000). When more information became available about HIV/AIDS, mass media took an active role in prevention by disseminating information to prevent infection through behavior change and treatment by means that can reach broad audiences, using, radio, TV, video, print and Internet (McKee et al., 2004).

Bertrand et al.’s (2006) meta-analysis of fifteen mass media programs in Africa, Asia, and Latin America found mixed results for knowledge, attitudes, and behavior. Evidence from the meta-analysis showed an overall increase in knowledge pertaining to HIV/AIDS transmission and prevention, as well as an increase in comfort level in talking about sex and negotiating condoms use with their partner. However, this analysis did not find significant effects in increasing personal risk perceptions, the ability to negotiate abstinence, increasing the age of sexual debut, or decreasing the overall number of sexual partners reported. Overall, the meta-analysis showed the strongest evidence pointing to increased knowledge, interpersonal communication, and condom use.
**Social Marketing**

Although social marketing has been a popular form of health communication for years, most people do not have a complete understanding of its full concept. People utilizing social marketing see it as only a form of health communication or promotion, but this ignores the exchange process that is critical for social marketing to work effectively (Grier & Bryant, 2005). Social marketing is the application of marketing concepts to promote individual behavior change; it helps facilitate the molding of social norms to fit positive behavior modification (Kotler et al., 2002).

According to Bagozzi (1978), the main difference between other mass media and social marketing is the inclusion of Exchange Theory in social marketing. His theory hinges on the belief that individuals make decisions out of self interest and they always try to get the most value by choosing what will give them the most benefit for least amount of cost. Consequently, people trying to socially market programs must offer benefits that individuals really value. Social marketing also runs on the principle that there must be a cost benefit to the consumer for behavior change and that there are intangible costs, such as time and effort, that the individual puts into the behavior change, so they must perceive that the behavior change will give them a net gain for their efforts (Bagozzi, 1978).

With regard to HIV/AIDS, social marketing is often aimed at condom use, which has been facilitated by branding condoms. Branding condoms, or giving them a name to promote rather than being a generic product, has shown positive results in Kenya, where it increased the negotiation of condom use as well as the belief that condoms can be obtained easily (Agha et al., 2001). Exposure to branded condoms also increased knowledge of personal risk of HIV/AIDS and the perception of the severity of the
There was a dose-response relationship, with those more exposed to the branded advertising having positive health perceptions (Agha, 2001).

Radio as a Medium for HIV/AIDS Communication and Dramas

Radio is a widely established medium in the developing world for disseminating information (Masatu et al., 2003). Radio can also easily integrate local cultural aspects with outside expertise to increase enthusiasm for its programming. However, there have been few positive results relating to HIV/AIDS behavior change (Yoder et al., 1996).

The lack of evidence of behavior change may stem from the fact that few studies exist on the effect of radio in HIV/AIDS prevention programming. In Zambia, listening to a radio drama increased knowledge and some people reported reducing risky behavior (Yoder et al., 1996). In study of a radio drama broadcast in Zimbabwe, some changes in beliefs and attitudes were attributed to the radio drama, but actual behavior change was inconclusive (Piotrow et al., 1992).

Although the use of radio in HIV/AIDS behavior change has not had many positive results, radio has had a good record as a medium for health education and awareness in other health fields, specifically family planning. For family planning, it was found in Nigeria that listening to a targeted radio program increased people’s visits to family planning facilities (Piotrow et al., 1990), and increased the ease of talking about family planning with family and partners in Ghana (Hinden et al., 1994) and Gambia (Valente et al., 1994).

Garifuna-produced Honduran Radio Dramas

In Honduras, a HIV/AIDS education radio drama was funded by the Academy for Educational Development, USAID, and conducted through the Health Communication
Partnership. This program was designed for Garifuna aged 15–24 and included 170 Garifuna from the Garifuna communities, who went through drama training to teach these individuals to write scripts and learn to act in radio dramas centering on life in the Garifuna communities and some of the issues they may face due to HIV/AIDS. These radio dramas were produced in Spanish and Garifuna, were culturally appropriate, and used traditional Garifuna songs in their production. The final production of the radio drama came to 90, 15-minute radio spots, which were promoted through radio spots, t-shirts, ball caps, posters, CDs, street banners, posters, flyers and 40 community mobilizers who helped with 28 community launch parties, attracting 800 community members. The NGO also produced a discussion guide to accompany the production and trained 16 health educators and members of local Garifuna NGOs to facilitate discussions about the programming. A rapid assessment in 7 communities after some of the programs had aired found that of the 329 Garifunas interviewed, aged 15–24 (about 50 members per community), 61% listened to the radio program. Of those who did listen to the radio drama, 76% talked about the program (Health Communication Partnership, 2004a).

**Live Theater**

Live theater has its advantages over other forms of HIV/AIDS educational programs in terms of cost-effectiveness—performances reach many people. The messages in theatrical performances also are uniform, unlike gathering information on a one-on-one basis, which can vary from person to person. Furthermore, it allows information to be conveyed while still maintaining ambiguity, thus eliminating the possibility of embarrassment. Nor does dramas require literacy and it can be more culturally appropriate and entertaining (Valente & Bharath, 1999).
Exposure to live theater in a school setting increased knowledge of HIV/AIDS and condom use among sexually active youth over a written curricula (Harvey et al., 2000). Teen theater has also been shown to cause a modest gain in teens’ reported willingness to discuss sex and contraception (Hillman et al., 1991).

**Garifuna-produced Live Theater**

The same NGOs that produced the radio drama also conducted 12 theater workshops, training 120 active volunteers. These theater workshops utilized professional theater personnel to train local Garifuna youth to write scripts for theater and teach them how to perform drama around life in the Garifuna communities, centering on HIV/AIDS issues, such as stigma, medical costs, routes of infections, and prevention. These theater performances were aimed at youth aged 15–24 and were performed 15 times in 10 communities, immediately followed by a question-and-answer session after each performance. The NGOs estimate that these performances exposed around 2,000 Garifunas to HIV/AIDS information in an entertaining atmosphere that kept their attention (Health Communication Partnership, 2004b).

**Summary**

The literature review suggests that health education/communication interventions in HIV/AIDS prevention have had mixed results. For the most part, educational interventions, regardless of whether they are interpersonal or mass media-based, increase HIV/AIDS knowledge and certain aspects of attitude change, specifically an openness to communicate about HIV/AIDS, and they have reduced stigmas for those with HIV/AIDS. However, with the exception of social marketing, which has had limited success with condom use, almost all of these educational techniques have been found not to lead to
substantive long-term behavior change. Simply put, none of the educational interventions have led to significant change in the UN-promoted behavior changes of Abstinence, Fidelity, and Consistent Condom Use.
Chapter 3

Theoretical Approach to HIV/AIDS Interventions

Through the years many different behavioral science theoretical models have been created to deal with a plethora of health prevention problems. Most prevention theories rely on the assumption that providing correct information about HIV/AIDS transmission and prevention will lead to behavior change (UNAIDS, 1999). They all focus on the idea that individual actors make a conscious choice about their actions. The idea behind these health models is that behavior can be a result of deliberate action by social actors to promote their self-interests. The concept is that the individual will measure the likelihood of a risky outcome to the possible reward of the behavior and act accordingly (Glanz et al., 2002).

Research has shown that educational interventions based on theory have a better chance of success and theory facilitates an easier understanding of an intervention’s success or lack of success (UNAIDS, 1999). The majority of HIV/AIDS interventions in Honduras and elsewhere are theory-driven and most use the Stages of Change Theory. (See Appendix A for more on how this was ascertained.)

The Stages of Change Theory is a logical choice for a theoretical framework for a HIV/AIDS educational intervention since a search of health education and promotion literature in 1999 and 2000 revealed that the Stages of Change Theory was the second most used theory in interventions, behind Social Cognitive Theory (Glanz et al., 2002). Stages of Change Theory also has a good record in longitudinal studies which reported positive effects among women assigned to individual stage-tailored counseling—knowledge of stages of change theory led to more consistent condom use in last sexual
encounter than among women who received reproductive health counseling and services (Galavotti et al., 1998).

**Stages of Change Theory**

The stages of change theory was constructed by systematically merging over three hundred psychotherapy theories to make a more cohesive model that included such diverse developmental models as Freud’s consciousness-raising tradition, Skinner’s contingency management, and Roger’s helping relationships by matching the fact that in all of these models individuals go through different stages of change (Glanz et al., 2002). From comparing and contrasting these models, Prochaska et al. (1979) found that these models could be reduced to five significant levels of raising consciousness to enacting behavior change.

This theoretical model, named the transtheoretical model but often called the stages of change model, utilizes “stages of change that have been derived from diverse theories of behavior change” (Prochaska & DiClemente 1998, p.4). This theory was ultimately fleshed out in an examination of smokers to see what assisted them in cessation. Study findings revealed that the smokers who stopped smoking, did so through a progression of stages.

One of the most unique aspects of Prochaska and DiClemente’s stages of change theory is that this theory incorporates a timing dimension not found in most other leading theories of psychotherapy. This theory incorporates the idea that change is an ongoing process and not a sudden occurrence. Individuals are at varying levels of motivation for change and it is practical to accept this—thus, this model is constructed as a circular model, not a linear model. People can start at any stage and may cycle through stages.
many times. There appear to be differences in how different stages fit different situations at different times. Some stages are clear and easily recognized, while others are not as easily recognized. Stages of change theory has been shown to highlight barriers to change for individuals to overcome. Because HIV/AIDS is highly driven by behavior, many health professionals have seen it as a natural fit for educational interventions (UNAIDS, 1999).

**Stages in the Stages of Change Theory**

1. **Precontemplation.** At this beginning stage, people are usually not aware of the behavior as a problem, or do not have any intention of taking action to it in the foreseeable future (usually thought of as the next six months.) Some theorists characterize these people as being resistant or unmotivated to change, thus “hard to reach.” HIV/AIDS example: People who are not aware of HIV/AIDS or do not intend to change their behavior because they do not see themselves at risk.

2. **Contemplation.** At this stage, individuals are aware of their behavior and the risks that are involved with it; however, they are still weighing out the costs and benefits of changing their risk behavior. People can stay stuck in this stage for long periods and they often seek self motivation or encouragement from others to succeed in moving to the next stage. They are not ready to participate in traditional action-orientated programs. HIV/AIDS example: The individual knows about HIV/AIDS and its risk behaviors and is considering how they may practice safer sex in the future.

3. **Preparation.** At this stage the individual has made the decision to make a behavior change and is actively seeking a means to enable them to do so. The action will be taken usually within the next month and the individual can be assisted at this stage with setting up a plan of action and establishing set goals. HIV/AIDS example: The individual used a condom at their last sexual encounter.

4. **Action.** In this stage the individual is actively attempting to change their specific risk behavior for the last six months. The risk behavior change may be overt, but not necessarily so, it only needs to meet the criteria to reduce or stop the risk behavior. Individuals at this stage can benefit from feedback, help with problem solving, and emotional support. HIV/AIDS example: In this stage, individuals have been abstinent, monogamous, consistently using condoms, or a combination of these behaviors for less than six months.
5. **Maintenance.** At this stage in the model, the individual attempts to prevent any relapse into the prior risk behavior. At this stage, individuals have more confidence to continue their behavior change, but always have temptation to relapse. Some individuals stay in this stage for extended periods of time. HIV/AIDS example: Individuals in this stage have been abstinent or monogamous for six months or more, consistently use condoms, or a combination of these behaviors.

6. **Termination.** At this stage, the individual no longer gives into temptation, but many behaviors are not practical at this stage. HIV/AIDS example: There is no termination stage.

Or

**Relapse.** This individual returns to the prior risk behavior or is inconsistent with this behavior. This stage can happen at any time in the process. HIV/AIDS example: The individual starts having unprotected sex again or starts having multiple partners.

Source: (Glanz et al., 2002, p.100)

A great strength of the stages of change theory is its ability to tailor health intervention programs to assess a specific stage that a majority of the population, specific groups, or subgroups, to tailor it to them for a better use of resources and avoiding redundant steps and boredom to keep them in the program. All health interventions utilizing the stages of change theory hinge on the idea that individuals can change behavior by engaging in self-efficacy and will not relapse in stressful situations. (Glanz et al., 2002).

Catalysts to change included in the process of change typically revolve around the three factors that reflect the most common types of temptation. These temptations, highlighted by Prochaska et al. (1994) are emotional distress, positive social situations, and cravings. The strategies for advancing individuals through these stages of the model can be reduced to ten common processes that can transcend most, if not all, behaviors.
The common catalysts that have been utilized for movement through the various stages are seen in Table 3.1. The one potential catalyst specific to HIV/AIDS is risk perception. Perceived risk has been shown to act as an independent variable useful in predicting risk reduction efforts (Prochaska et al., 1994).

Simplistically, this theory, like all individual-level models, believes that increasing an individuals’ knowledge will lead to attitudinal change, or increased personal risk, which finally leads into a behavioral modification to reduce their risk. This adapted model and how it works can be seen in Appendix B. The model is adapted from Procsaska et al. (1994, p. 478), and shows how all of the catalysts of change utilized in processing the different stages of the theory can be condensed to the use of knowledge; attitudes shifts to drive behavior change on the individual are achieved through self-efficacy. All individualistic models (including the Stages of Change Theory) rely on the individual to process information to make rational behavior choices to reduce risk. (See Appendix B for elaboration of catalysts to change.) For the most part, the catalysts of change in the Stages of Change Theory rely heavily on information to get the individual to progress through levels in order to take action in practicing safer sexual behavior, such as abstinence, fidelity, and/or condom use.

**Critical Assumptions of the Stages of Change Model:**

As with most theoretical models, assumptions must be made for this model to work. With all behavior models, the stages of change model cannot account for all nuisances of behavior change. The theory also assumes that behavior change occurs in a specific sequence of stages over time that are open to change. Truthfully, most of the
target populations for the educational interventions are not prepared to enact behavior change and cannot be served by action-orientated interventions (Glanz et al., 2002).

Cross-sectional studies support both the generalizability of the model to HIV/AIDS prevention as well as the utility of the stages of change and self-efficacy of the individual’s ability to effectively reduce their own HIV/AIDS risk behavior (Grimley et al., 1993; Prochaska et al., 1990; Schnell et al., 1993). Studies that have utilized the stages of change theory have shown a difference between steady sexual partners and casual sexual partners in relation to HIV/AIDS risk behaviors (Grimley et al., 1993; Prochaska et al., 1990). The stages of change theory has been very adaptable in being used to develop and validate surveys to assess the process of change through different stages (Grimley et al., 1993). This critical track record in the field does not come without criticisms, however.

**Weaknesses of the Stages of Change Theory**

Researchers have criticized stages of change as not having long-term goals/only being useful in developing short term gains. A review of 26 past journal articles on programs to increase physical activity based upon the Stages of Change Model revealed that initially the behavior change occurred, in that the physical activity occurred and frequency increased, but it had mixed results for long-term behavior change. Over time, the increase in physical activity did not last (Adams & White, 2003).
Table 3.1

Processes of Change that Mediate Progression Between the Stages of Change

<table>
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<tr>
<th>Stages of Change</th>
<th>Precontemplation</th>
<th>Contemplation</th>
<th>Preparation</th>
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<th>Maintenance</th>
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<td>Processes</td>
<td>Knowledge Based Catalysts of Change</td>
<td>Consciousness raising</td>
<td>Dramatic relief</td>
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Because behavior change is very complex, stages of change may not be a workable fit. Past studies utilizing stages of change as a theoretical framework have shown that individuals who are trying to accomplish the recommended behavior change had varying perceptions of the positives and negatives of the behavior change; many who thought they were complying with the recommended behavior change in actuality were not (Ronda et al., 2001). Utilizing self-assessments through surveys to gauge which each population’s stage in the model has been found to be unreliable; it is not known whether stage-targeted interventions through the stages of change model are more effective than other interventions (Adams & White, 2003).

The ‘stages of change model’ also assumes that each stage must be met for progression, when in reality stage progression is not necessary for behavior change. Stages of change theory also has a weakness that is inherently true with all theories built on intentions, in that these intentions may not translate into the actual behavior change (Sutton 2005). Perhaps the greatest overall weakness is the focus on individual-level psychological process only, which ignores the interactive relationship of behavior in its social, cultural, and economic dimensions and thereby misses the possibility of fully understanding the crucial determinants of behavior. This last criticism is probably the most often cited problem with the stages of change theory, as with most individual-level preventions programs, especially in the context of HIV/AIDS prevention programs. Motivations for sex are complicated and unclear, and occur within a broader social context (Glanz et al., 2002).

The biggest criticisms of individual-level theoretical models are that behavior cannot always be accounted for by beliefs. Beliefs often do account for variance in beliefs, but not the behavior itself. Direct attempts to modify behavior usually fail and alternative approaches are
often needed. It has been noted that both individual and socioenvironmental factors should be targeted in health interventions (Glanz et al., 1990).

Individual-level theories do not take into account the cultural aspects of social networks. Demographic factors can be used as indicators of cultural aspects, but they fail to measure directly many aspects of culture. Examining social networks and the diffusion of information about HIV/AIDS prevention is critical. Understanding how knowledge filtrates through social networks is needed to implement and evaluate prevention programs, to understand if they work with diverse populations, and to guide revisions of programs to fit local context. An individual in any social setting will have many sources of information to tap into, and often times these social networks could run parallel or counter to the information being provided through the educational interventions.

Social Network Theory

Social Network Theory in sociological demography is relatively new, and has had an early emphasis on fertility. The term “social networks” borrows from many different fields, and all theories have kernels of the same concept imbedded in them, namely that, by analyzing social networks, one can best understand how ideas and concepts flow from the macro to the micro level (Granovetter, 1973). These diverse schools of thought include Science and Technology’s Actor-network Theory (Callon, 1986; Latour, 1986); and Sociology’s Diffusion of Innovations Theory (Rogers, 1962) and Social Network Theory (Granovetter, 1973); and Social Psychology’s Small World Phenomenon (Milgram, 1967). However, the roots of the Social Network Theory began in anthropology with Levi-Strauss’s book, The Elementary Structures of Kinship (Levi-Strauss, 1969).

Methods for analyzing social networks have been under development for the past fifty years (Wasserman & Faust, 1994), but it is only in the last decade that work has begun in the
field of demography (Morris, 2004). Interest by public health researchers in social networks grew rapidly in the 1980s, especially among epidemiologists in response to HIV/AIDS. Early Social Network Theory was utilized by public health researchers to understand and trace STIs and to get a better understanding of individual, community, and social group characteristics in which STIs traveled. This research could then be utilized to create preventive programs to be tailored to high risk communities in hopes of preventing the further spread of HIV/AIDS (Laumann & Youm, 1999b).

Recent public health theory has moved in a different direction with Network Epidemiological Theory, which takes the perspective that there are inherent weaknesses in the individualistic rational choice theory used in public health. Network Epidemiological Theory believes that Social Network Theory must move away from the traditional focus on behavior that links individual attributes to individual outcomes to get a clearer picture of how infections are spread. In HIV/AIDS research, in order to gain an understanding of the behavior behind the transmission, it must involve at least two or more people and must be dependent on the other links that either of these two people might have with others. Network Epidemiology compensates for this weakness of early Social Network Theory by looking at the applied research of how position, groups, connectivity, and overall structure affect the spread of infectious disease (Morris, 2004).

Social Network Theory in sociology, on the other hand, has led an almost parallel life to its use in public health. Sociology’s network theory has an emphasis on information and how it is passed and understood by the individual. Thus, it looks at the network and the characteristics of the individual, as well as the quality and origin of the communication. Social Network Theory is
especially useful in understanding how information and technology are diffused to individuals and how innovation is adopted (Rogers, 1962).

This next section concentrates on research in social network theory, specifically on public health and sociology, to see how each have looked at different aspects in social network theory, especially in regard to HIV/AIDS.

**Public Health Use of Social Network Theory**

Most of the literature regarding STIs or HIV/AIDS examines sexual networks using public health network epidemiology, which tends to focus at the individual level. However, in the event of STI infections, sexual behavior decisions, such as partner selection and the decision to have sex, do not exclusively indicate reasons for the spread of a disease. Rather, the culmination of the individual’s sexual decision as well as the epidemiology of the disease and social context in which the decision was made, determine the spread of STIs (Aral et al., 1996). However, in reality sexual decision making depends on how social life is organized, the shared norms that guide how relationships are endorsed, and how the population assimilates (Laumann et al., 2000).

Recently there has been a push by some researchers to make the actual sexual partnership the unit of measurement, rather than the individual, when measuring the spread of HIV/AIDS (Morris, 2004). Traditionally, research has looked at the individual, social, and cultural barriers that prevent the behavior change regardless of the dissemination of knowledge about the fatal consequences of HIV/AIDS and its prevention. To understand the spread of HIV/AIDS, we must be aware of social networks in which the disease clusters. HIV/AIDS cannot be studied as other infectious diseases because it does not spread as they do; rather, the manner in which the disease is spread is of a personal nature because it occurs via sexual contact. To truly understand the
spread of HIV/AIDS you must conceptualize the population as a grouping of individuals linked to form a large social network. Sexual partners are not randomly selected; rather, they are chosen from within their social network (Klovdahl, 1985).

Klovdahl (1985) believed that “the structure of a network has consequences for its individual members and for the networks as a whole over and above effects of characteristics and behavior of the individuals involved” (p.1204 ). Due to inexpensive transportation and the economic necessity for people to move for opportunity, the modern social environment has greatly changed. No longer can a person’s social environment be measured by their immediate environment where they reside and work. Instead, it should be measured by the social relationships they maintain, regardless of their location (Klovdahl, 1985). Because of the greater transience of modern populations, Klovdahl believed that “traditional cluster epidemiology is almost obsolete, making personal contacts, rather than physical proximity a much more valid measure of possible exposure to pathogenic agents that are transmitted through personal relationships” (p.1206 ).

Generally, people have a tendency to “homophily” or the idea that network connections depend on similarity, especially in terms of partner selection. People cluster into social networks of demographic similarity (such as age, race, socioeconomics) because similarity breeds connection, and people select sexual partners from their social networks (McPherson et al., 2001)

Personal selection of sexual partners and behavioral choice are conditioned into individuals by their social network through stigma and acceptance and researchers are just beginning to understand how important social interactions are for passing information, new ideas and acceptable social behavior. (Laumann & Gagnon, 1994).
For the most part, public health social network theory has concerned itself with mapping out social networks and statistically analyzing the growth effects that a social network can have in being greater than the sum of its individual parts and their need to be measured differently. However, it has not attempted to understand how information and social influence passes through social networks and how this can affect decision making on the individual level, which could be critical to understanding HIV/AIDS prevention. Sociology has started to broach this area in the study of fertility by addressing the types of information that are passed through these networks.

Use of Social Network Theory in Fertility

Although the concept of social networks in sociology has been used to great success in many fertility studies (Kohler et al., 2001; Montgomery & Casterline, 1996; Montgomery, 1993), relatively little has been done in the HIV/AIDS arena. Montgomery and Casterline’s Social Network Theory, utilizing social learning and social influence on fertility decisions, can be easily transformed to the study of sexual choices. Their concept relies on the idea that a person’s network of friends and family affects one’s behavior in the way that information and norms are filtrated through them. When people must make decisions in an environment of uncertainty, they will try to avoid risk. To decrease their risk, individuals will utilize their social network. Then through social learning they find out what there is to know about this risk, as well as what their chances are of avoiding this risk before acting on it. This conceptualization of the impact of social networks has rarely been applied in HIV/AIDS research.
Montgomery and Casterline Theory of Social Networks in AIDS

Helleringer and Kohler (2005) used this theoretical approach in studying HIV/AIDS in Malawi and in the process gained some new insights. They looked at social influence in the context of HIV/AIDS to refer to the process by which preferences for sexual behavior, gender relations, or any behavior relevant to sexual decision making could be affected by opinions and attitudes that prevail in an individual’s social environment. Social influence may cause behavior change by pushing individuals to conform to social pressures—e.g., if they disapprove of a man having multiple partners, or frequenting sex workers. Social learning is the process by which individuals learn about HIV/AIDS and its prevention through their network (Helleringer & Kohler, 2005).

In the case of HIV/AIDS, social networks are utilized to learn from friends about people who have had HIV/AIDS, how it is caused and prevented, and to gather information about a potential partner and their history. Social influence, or stigma, is the norm on partner formation and behavior that dictates how a person will act sexually in their society. If it is not the custom to have multiple partners or to be sexually active outside a marriage, then the stigma of shame can dictate decision making.

This work on social network analysis and HIV/AIDS has revealed that two aspects of social networks, social influence and education, impact HIV/AIDS differently. These two aspects affect perceptions depending on network density (the number of friends you have direct contact with) and the learning attained by individuals from it. In Malawi, Helleringer and Kohler (2005) found that social networks regarding HIV/AIDS influence individual perceptions of HIV/AIDS. The probability of a respondent being worried about HIV/AIDS is increased by the prevalence of HIV/AIDS concerns in that person’s network (i.e., others’ concerns about HIV/AIDS affect the individual). In contrast, if the person belongs to a network that is not concerned with HIV/AIDS,
the probability is that the individual in the network will not worry about HIV/AIDS and will not take precautions; consequently, HIV/AIDS risk increases. With regard to social learning, the Helleringer and Kohler study found that social networks informed the individual about the disease and their own risk to the disease to make their own informed decisions.

**Risk Perception**

In most health behavior models, perception of risk is a prerequisite for behavior change, which is a finding supported by empirical studies (Ajzen and Fishbein 1980; Smith and Watkins 2005; Weinstein and Nicolich 1993). The theoretical underpinning of individual-level behavior models is that increasing the individual’s knowledge and risk perception will influence this person to make a decision about behavior change that reduces a possible health risk. In the Stages of Change Model, this perception of self-risk is looked upon as a tipping point that will push the individual from the contemplation stage to acting on the decision. After years of program implementation in these communities, health professionals expect that individuals have taken the substantive step from acknowledging and understanding HIV/AIDS to perceiving they are at risk and have a need for behavior change.

COMCAVI baseline surveys show that of the 598 Garifuna youth, 43% of the youth responded that they believe they are at risk of HIV infection. Of the 302 surveys with Garifuna adults, 48% of them responded that they consider themselves at risk for HIV infection.

Denial of risk for HIV/AIDS has been a well documented phenomenon (Aggleton et al. 1994; Becker and Joseph 1988; Ingham and van Zessen 1997; Nzioka 2001) in research. Even though perceived AIDS risk has been linked to a community’s AIDS related mortality and morbidity (Cleland 1995; Dodoo 1998), a focus groups in a country with high prevalence show that even though youth will admit to AIDS as a high risk in their area, they still do not perceive
themselves at risk (Akwara et al. 2003). This could be due to the fact that many men do not believe that changing their behavior will reduce their chance of contracting HIV/AIDS and in many developing world contexts, boys are pressured into having many sexual partners as a sign of manhood (Kaler 2004) and as seen in this study, parents do not feel comfortable in talking about sexuality.

Kaler’s research in Malawi shows that fatalism towards HIV/AIDS infection fall under five subheadings, pure fatalism, it is God’s will that a person contracts HIV/AIDS or not. That AIDS is a conspiracy theory, to stop African’s from having children or was designed by western powers. That AIDS is because of “character flaws” or sinning. Sex is an irresistible force, so you might as well enjoy it and many believe that they already have HIV/AIDS because of the number of partners they have had in the past, so they just accept it, without having conclusive results because they have never been tested (2004).

Impoverished people tend to have more fatalistic attitudes (Neff and Hoppes 1993; Ramirez et al. 2002) and people holding fatalistic views tend to have less accurate HIV/AIDS knowledge and perceive themselves not at risk (Akande 1997), and a determinant for males to be less likely to use condoms and have multiple partners (Moore and Rosenthal 1991)

Socialization of Risk

Social networks can be used to understand how knowledge and risk may lead to behavior change. Research utilizing DHS surveys has consistently shown that those in areas of high HIV/AIDS prevalence have the knowledge needed to prevent infection (Behrman et al., 2003) and show a deepening of HIV/AIDS risk perception (Rutenberg et al., 2000). In most health behavior intervention theories it has been shown that stages are needed to achieve behavior change. These prerequisite stages start with increased knowledge and proceed to increased
personal risk perception, before behavior change can take place—this theory has the support of empirical research (Ajzen & Fishbein, 1980; Weinstein, 1984). Individuals do change their behaviors, but past research and economic theory suggest that these individuals do not make these decisions on their own; rather, they do it by forming their opinions by assessing their risk of HIV/AIDS infection through their interactions with their friends and families (Kohler, 1997; Manski, 2000). Social network research has shown that the individual’s social network influences their assessment of personal risk, beliefs and personal expectations (Fiske & Taylor, 1991; Nisbett & Ross, 1980), and these social networks affect risk perceptions and considerations of new behavior (Behrman et al., 2003).

**Different Socialization Patterns**

All networks do not socialize in the same way, nor should each individual be considered equal in the way they select partners or make behavior choices. Characteristics of individuals and the norms of their environment play on their ability to make choices and the choices available to them. Gender and race, especially in terms of power dynamics, are two characteristics that have a history in sexual networks and need to be explored as variables that impact choice in sexual behavior.

**Gender**

In Latin American culture there is a disproportionate power dynamic between men and women that acts as a barrier to sexual decision making and thereby increases the spread of HIV/AIDS. Many of the gender-based issues include: women’s inability to communicate about sex or negotiate condom use (Aggleton, Rivers & Scott, 1999). The perception in Latino culture is that the male has the exclusive right to initiate sexual intercourse, and that the need for sex is an uncontrollable impulse for men (Glasman & Albarracin, 2003). In Latino culture, it is also not
seen as macho to delay sexual intercourse to acquire condoms (Burgos & Diaz-Perez, 1986). With much of the culture embracing these socialized constructs, it is difficult for females to fight this hegemony, making negotiations of sexual intercourse and condom use difficult in Latin America.

Race

To understand the research in racial variability in social networks, one must first understand a little about public health sexual network mapping and its use within mapping STIs. When looking at the spread of a STI, there are three levels within a sexual social network: the core, bridging, and general population groups. As explained by Laumann and Youm (1999):

1. **The core group.** This is the where many of the STI infections start, usually because of the frequent contact with the disease (i.e., sex workers, intravenous drug users, etc.)\(^2\) This group is on the periphery of, and thus rarely has direct contact with, the general public.

2. **The bridging group.** This group is made up of people who have direct contact with the core group and the general public. This group consists of people who usually have a lot of social mobility (i.e., clients of sex workers, people in higher social classes that use intravenous drugs, etc.).

3. **General population.** This group is composed of people towards the center of normative society. They are usually at low risk until they are bridged by one of their members into a high risk, or core group.

Source: (Laumann & Youm, 1999b)

\(^2\) Note: This is not to be confused with sociological social network theory, where the core often involves the place in the social network where the nodes (individuals within the network) have the most density of direct interaction with other nodes in the network. In the sociological model, usually the core group is the most popular group or the group with the most status, while the peripheral cliques is where you would find individuals that do not have direct contact with the general population, such as sex workers and intravenous drug users.
With this model of transmission in sexual networks, using the National Health and Social Life Survey (NHSLS), Laumann and Youm found that different degrees of STI rates among different races could be explained by their different patterns of pair bonding within their social network. In the study, the African-American population had a higher proportion of their population acting as a bridging group because of a higher propensity to have multiple partners. Although the general African-American population have only one partner, the chance that their partner is a member of the bridging group is five times higher than it is for a non-Hispanic white and four times higher than it is for a Hispanic (Laumann & Youm, 1999a).

Another important difference between whites and African-Americans found by Laumann and Youm is the duration in their concurrent partnerships. Thus, sexual networks of whites are mostly monogamous with low levels of long-term concurrency. This patterning of sexual networks reflects a partnering process that can be described as serial monogamy. A large proportion of the African-American population, in comparison, appears to be participating in long-term polygamy, which is primarily organized around non-nuclear couple households and high rates of poverty (Laumann & Youm, 1999a).

This study revealed that “serial monogamists” were more likely to adopt condom use to reduce their personal risk with having multiple partners. In contrast, people in concurrent partnerships, especially long-term partnerships, were much less likely to use condoms without violating trust between sexual partners. African-Americans involved in long-term concurrent partnerships were less likely to use condoms even as their personal risk of infection increased from engagement with multiple partners (Laumann et al., 2000).

One cannot assume that the results of a study among U.S. African-Americans and whites will be the same as those from a similar study in Honduras. However, the dynamics of the study
go beyond race and also have to do with a community being stigmatized and marginalized by another race in a position of power. This study showed how African-Americans adapt their behavioral traits to this hegemony. This, to an extent, could be utilized to understand the plight of the Garifuna, who have economically and socially marginalized status in their environment.

Often the numbers of partners are not as important in the spread of HIV/AIDS as concurrent partners. Concurrent partners who overlap in time have been shown to be an important factor in explaining HIV/AIDS prevalence across populations. “Concurrency can create large, loosely structured, constantly shifting web of connected people in a network, enabling infectious agents to spread rapidly and pervasively” (Morris, 1997, p.646). It has been shown in computer simulations that concurrency has a significant effect on the spread of a STI throughout a population, raising the prevalence exponentially, even in a population that has low rates of multiple partnerships (Morris, 2004). When a person from a core group in a network has intercourse with a person outside their network of direct affiliation, this acts to “bridge” networks and can have a devastating effect in a social network whose norms are like the Garifuna in this study.

When a core group that has high risk is linked with the general population, this connection through a few individuals brings these two groups together and provides the opportunity for disease spread (Bearman et al., 2004). For some cultures the implication for the spread of diseases is not harmful because if it were to enter into the network, the chain of infection could be stopped with condom use. However, in other cultures, where condoms are not the norm, the spread of disease can be dangerous.
Problems of Measuring with Individual Behavior Change Models

One of the chief problems with the Stages of Change Model or any of the other individualistic rational models is the problem with measuring and evaluating the intervention utilizing the theory as a framework. The stages of change theoretical model has distinct levels of progression by which an individual’s stage may be gauged within the model, but when it comes to assessment of the model it relies on a measurement of knowledge, attitudes, and behavior. A typical conceptual model for measuring the impact of an educational intervention or media campaign can be seen in Figure 3.1, which is borrowed from Rice and Atkin’s book, Public Communication Campaigns (2001).

**Figure 3.1. Health Communication/Education Evaluation Model**

The problem in this model is that almost all educational interventions have pre-set outcomes that development organizations need to measure. In the case of HIV/AIDS, these objectives are measured through knowledge, attitude and practice changes self-reported by the individual. For HIV/AIDS educational interventions, knowledge and attitudes are measured as a means to understand the movement of the individual towards the ultimate goal of all educational
interventions, namely the reduction of risky sexual behavior by adhering to the ABCs. From past meta-analysis of educational interventions to prevent HIV/AIDS, researchers have observed knowledge increases and attitude changes towards the HIV/AIDS stigma, but not to personal risk perceptions—almost across the board, risky sexual behavior does not change in any meaningful way (Kirby et al. 2006; Klepp et al. 1994).

The problem with using fixed choice of behavior change to measure via surveys is that one misses the possibility of behavior change occurring outside the realm of the proscribed ABC behavior. For prevention interventions to work, it is important to understand any behavioral changes that are occurring and the reasons. These changes, if they do occur, are best understood by learning how informal interpersonal social networks are passing information and the social norms that are enforced around risky sexual behavior. To receive a better understanding of the cognitive, attitudinal, and behavior changes at the individual level, it is important to see how social networks may be affecting knowledge accrual and influencing the individual’s behavior decisions outside of the educational intervention. In this study, this occurred through an addendum to the usual individual-level rational model—that is, the addition of an assessment of how social networks are affecting Garifuna knowledge and influencing their risky behavior with regard to HIV/AIDS, as seen in Figure 3.2.

This model flows like a traditional health/communication model, with demographic characteristics, socioeconomic status, community resources and individual characteristics influencing knowledge acquisition, attitude adjustment, and the campaign/educational intervention. Then these stages ultimately influence change to reduce risky behavior. However, the difference in this model is the addition of monitoring informal social networks to better understand how the intervention is changing the actual knowledge, attitudes and behavior of the
target audience. For the most part, social networks will not influence direct knowledge acquisition, however some information coming through social networks that are second-hand sources may be providing incorrect or conflicting information compared to the educational intervention, thus skewing the behavioral results.

![Conceptual Model for Research](image)

**Figure 3.2. Conceptual Model for Research**

Attitudes, in the case of personal risk of infection with HIV/AIDS, should be scrutinized to understand how knowledge is affecting it, because individuals who understand how HIV/AIDS is spread and its prevention could perceive themselves as not being at risk by avoiding those behaviors or reducing their risk. The attitude box in the model reflects this in that individuals can take the knowledge of HIV/AIDS risk and feel more or less at risk, depending on their perceived behavior.
Behavior must be understood through social networks to see how behavior is actually changing, beyond the ABC behavior. This conceptual model moves beyond the understanding of abstinence, condom use, and number of partners in a set period of time, to include how and why potential sexual partners are being selected. Social networks will also help elaborate on changing behavior strategies with different partners, such as using condoms with casual partners and how and if negotiating condom use occurred with a partner.

This model incorporates personal social networks to understand how influence and information traveling through them might elaborate on barriers or changes outside of the ABC behavior to improve future interventions. To test this model a mixed methodology was used.
Chapter 4
Quantitative Methodology

This chapter discusses the quantitative methodology of this study: how the data were collected, the reasoning behind the variables selected and how they measure the intended phenomena. This section begins by discussing the source of the data, how the sample design is structured, and the strengths and limitations of that design.

General Information on Data Set

The data for this research come from the 2005–2006 Honduran Demographic and Health Survey (2005–06 HDHS). The Demographic and Health Survey (DHS) started as a follow-up to the 1984 World Fertility Survey and Contraceptive Prevalence Surveys undertaken in the 1970s (Measure DHS 2008). The DHS surveys are nationally representative household surveys with large sample sizes, usually between 5,000 and 30,000 households. These surveys provide for a wide range of monitoring and impact evaluation indicators in the areas of population, fertility, health, nutrition, HIV/AIDS, and domestic violence. For many countries and regions, the DHS surveys are the primary source of information for family planning, reproductive and health behavior of women in Africa, South and Southeast Asia, Central Asia, and Latin America.

The DHS surveys are often seen as an invaluable source of information for policy makers to make necessary decisions about allocating scarce resources of family planning and health services to those most in need. In addition, the DHS Surveys provide researchers with valuable information to better understand global health and fertility trends. The DHS was designed to have a core set of questions in every national survey to allow for cross-national comparisons, but it allows the questionnaires to be adapted to the specific needs of the participating countries. The
2005–06 HDHS was the first DHS to be conducted in Honduras. It lacked much variation from the traditional household survey, with the exception of an added section on HIV/AIDS knowledge and behavior.

**Honduran Sample Design**

The 2005-06 HDHS is collected in collaboration with ORC Macro (funded through USAID) in conjunction with the Honduran National Institute of Statistics (Instituto Nacional de Estadística) and the Honduran Secretary of Health (Secretaría de Salud). The 2005-06 HDHS utilized the Honduran National Institutes of Statistic’s sampling framework developed for the 2001 National Census. Utilizing this framework, a minimum of 1,000 households per administrative department were randomly selected, with some departments deemed as priority selecting 1,200 households (Measure DHS 2008). Sixteen of eighteen administrative departments are represented in this survey, with the exceptions being the Departments of Gracias a Dios and Las Islas de la Bahia, which were exempted due to difficulties with cost and accessibility. The survey design was constructed to provide reliable estimates of rural and urban areas, as well as the sixteen administrative departments selected, and the country as a whole.

All women aged 15–49 were interviewed in each household selected. Of the 21,000 households selected, 19,092 houses were occupied and 18,683 qualified for the survey specifics and agreed to be included in the study (98% of the households were included). In these houses, 21,634 women were eligible to be included in the survey, of which 19,948 agreed to be interviewed, for a 92% response rate. All women in the household within the age limits of 15–49 were asked about water and sanitation, family planning, sexual and reproductive health, vaccinations, maternal health, domestic violence, and HIV/AIDS (Measure DHS 2008). People living in institutionalized settings, such as army barracks, hospitals, work camps, and prisons,
were not on this list. However, these are male-dominated areas so there were likely to be few women.

The reasoning behind the stratification of this design was to reduce sampling error. In a stratified sample the sampling error depends on the population variance within the strata, but not between the strata. For this reason, the DHS system of surveying creates a sample with low internal variability. Other reasons include the need to stratify the population to get at the marked difference between subgroups within the population—stratification allows a flexible selection of each subgroup and ensures the representativeness of the total sample (Vaessen et al. 2005). The sample design allowed an over-sampling of smaller strata to provide adequate sample sizes needed for analysis. This could have been a potential bias in this study, but was correctable by weighing the study samples. The DHS does this by creating a design weight based on the probabilities of selection. Non-responses are also taken into consideration at the household and individual levels when making this weight (Measure DHS 2008). Since this is an initial study, only the household and the women’s individual level surveys were used. Two weaknesses in this survey were its being issued only in Spanish, and its lack of variables on race and religion. The lack of these variables was deemed acceptable by the Honduran agencies conducting the survey because it was thought that the variation within these categories would be negligible.

The main purpose of the Household Questionnaire is twofold: it is used to identify women eligible for the individual survey, by determining age, gender, education, and relationship to the household head. It then is used to gather information on the household itself, such as toilet facilities, materials used in its construction, source of water, and the ownership of various durable and consumer goods. This information is used by the DHS to create a composite wealth index, which is included in the data set.
The Women’s Questionnaire collects information from all eligible women aged 15–49. The information gathered includes: demographic background such as education, reproductive history, residential history, fertility aspirations, knowledge and use of family planning, prenatal care, vaccination and health practices for children under age 5 years, marriage and sexual history, woman’s occupation and employment status, husband’s occupation, and knowledge and behavior regarding HIV/AIDS and other sexually transmitted infections.

There are two main sampling weights in DHS surveys: household weights and individual weights. The household weight for a particular household is the inverse of its household selection probability multiplied by the inverse of the household response rate of its household response rate group. The individual weight of a respondent’s case is the household weight multiplied by the inverse of the individual response rate of her individual response rate group (Measure DHS 2008).

Limitations of Demographic and Health Surveys

General Limitations

Assogba, Campbell, and Hill (2001) listed four major advantages and six major limitations to large-scale surveys such as the Demographic and Health Survey (DHS). The four advantages of the DHS are: 1) standardization of approach, 2) cost-effectiveness, 3) nationally-representative sample, and 4) statistical reliability. These surveys have permitted cross-national comparisons, as well as in-country comparisons on fertility, mortality, and other sociodemographic characteristics. Through its long-standing work with many developing countries, the DHS also allows for comparisons over time. The DHS is based on probabilistic sampling, making generalizability a possibility for variables related to fertility, mortality, and sociodemographic characteristics.
The six major limitations for the DHS surveys are: 1) standardization ignores and limits country-specific factors, 2) retrospective data assumes that household characteristics have not changed over time, 3) cross-sectional data are hard to make longitudinal references from, 4) risky sexual behavior is self-reported, therefore it may be under-reported or over-reported, 5) questionable concerns of validity of large-scale surveys, and until recently, 6) DHS has not had test-based validity of whether respondents are HIV positive or not (Assogba et al. 2001).

**Honduran Demographic and Health Survey Limitations to this Study**

Since this was the first DHS to be conducted in Honduras, it was a preliminary study and lacked some key variables, especially for the present study which hoped to explore a special subgroup, such as the Garifuna. Because Honduras is over 90% Mestizo (a mixture of Amerindian and European descent) and the rest of the population is 7% Amerindian, 2% Garifuna and 1% Caucasian, the Honduran Ministry of Statistics decided not to have race as a measurable variable for analysis (CIA 2007). Due to the lack of race, the generalization of occupations, survey availability only in Spanish, and no geographic identification available to the subgroup identification level, the HDHS cannot successfully distinguish any Garifuna identifiers and thus must be used as a general view of Honduras. Other variables missing from the HDHS that could have been critical in researching HIV/AIDS is the lack of HIV seropositivity testing and religion. Religion could have contextualized individual behavior with regard to ABC behavior and information on HIV seropositiveness could have informed researchers about who has contracted HIV/AIDS and allowed them to compare those individuals’ behavior with those who do not have HIV/AIDS.

However, the benefits of the HDHS for this study are great. The HDHS offers an excellent overall backdrop on sexual social norms through which to compare Garifuna sexual
norms. The DHS is widely recognized as a data set with a meticulous methodology that makes it nationally representative. This data set also provides key variables in measuring the ABCs of HIV/AIDS prevention, which are the key sexual norms in preventing the spread of HIV/AIDS.

**Description of Measures**

The dependent variables measure sexual behavior adoption of the ABCs of HIV/AIDS. Each variable assumes a value of one if the respondent practices safe sex and a value of zero otherwise. The three sexual practices examined in this study were 1) *primary sexual abstinence*, among young women aged 15–24, 2) *being faithful* (fidelity), among sexually active women aged 15–49, who reported having at least one sexual partner over the last 12 months, and 3) *condom use* at last sexual intercourse, utilizing sexually active women aged 15–49. These three factors of safe sexual practices are seen as “complementary, synergistic, and inseparable in a national prevention program” (Okware et al. 2005, p.625). The ABCs of safe sex are seen as a root cause for the decline in HIV/AIDS prevalence rates in Uganda, Zambia, and Thailand (Low-Beer and Stoneburner 2003).

Sexual abstinence, or primary sexual abstinence, also refers to deferred sexual debut, which is not only important for avoiding immediate risk, but is also predictive of future high-risk sexual behaviors and increased protective practices. In Uganda it was found that lower median age of sexual debut is correlated highly with HIV infection and for young girls, especially in secondary school, abstinence was found to protect them (Schoepf 2003).

Fidelity might be the most important for reducing the spread of HIV/AIDS. The rate of change of sexual partners, especially concurrent partners, is a crucial determinant in the spread of sexually transmitted infections (Pilcher et al. 2008). However, even though the evidence points to the important protective aspect of fidelity, most HIV/AIDS prevention programs give it little
attention (Shelton et al. 2004). In this analysis, fidelity is considered as sexually active women being faithful to their partner in the last 12 months.

Condom use is a key component of prevention programs. It has been found that when people do not have access to condoms, other prevention practices, such as abstinence and fidelity, lose effectiveness (UNAIDS 2004a).

**Dependent Variables**

For the purpose of this study, the dependent variables are operationalized as follows.

**Primary Sexual Abstinence (Abstinence):** Defined as never engaging in sexual intercourse. This is captured through the question, “How old were you when you had your first sexual intercourse (if ever)?” The responses were never, age in years when had first intercourse, and first time when married. Respondents were coded “1” if they never had sex, and “0” if they had ever had sexual intercourse. For this study, only women aged 15–24 were considered.

**Fidelity (Be Faithful):** Defined as for those who are sexually active, having limited sexual intercourse with only their partner in the last 12 months. This is captured through the question, “How many sexual partners have you had in the last 12 months, excluding your husband?” In this analysis, it is assumed that women who are not married and responded to this question were answering about their partner in a monogamous relationship. Respondents who replied that they had no sexual partners other than their husband/partner were given a “1”, otherwise they were coded “0”. However, because of discrepancies in the data, the category of cohabiting, those who answered either a “0” or “1” were assigned a “1” while all others were assigned a “0”.
**Condom Use (Condom Use):** Defined as the use of a condom upon their last sexual intercourse, among sexually active women. The variable was coded “1” if the respondent used a condom at their last sexual intercourse and “0” otherwise.

**Independent Variables**

This section describes all sociodemographic characteristics, knowledge factors, level of women’s perceived ability to negotiate sex, and source of information sources. The independent variables of women’s perceived ability to negotiate sex and HIV/AIDS knowledge utilize a series of questions for measurement of this variable.

**Measure of Sociodemographic Factors**

Sexual decision making often is associated with sociodemographic characteristics. Sociodemographic characteristics have been shown to be predictors of sexual behavior. The sociodemographic characteristics utilized in this research were residence, age, location, education, occupation, wealth, and number of occupants per house.

**Residence.** This variable shows the usual place of residence for the respondent. This information was ascertained through the question, “Now I would like to ask you about the place in which you usually live. What is the name of the place you usually live? Is that a city, town or in the countryside?” Respondents were considered rural if their usual place of residence was designated rural by the Honduran census, and likewise for urban areas. This study compared urban and rural areas to ascertain differences in reported sexual behavior. The variable was coded “1” if urban and “2” if rural.

**Age.** This continuous variable is broken down into categories of five-year increments. This information is captured by the question, “How old were you on your last birthday?” It is expected that age will have a linear relationship with multiple variables, including primary
abstinence, which decreases with age, as HIV/AIDS knowledge should increase with age. This variable was created by the DHS. The categorical variable of age is split into five-year increments because variations in sexual practices are thought to be explained by stages of the life course. Thus, the age variable was treated as a dummy variable. The variable is coded “1” for ages 15–19, “2” for ages 20–24, “3” for ages 25–29, “4” for ages 30–34, “5” for ages 35–39, “6” for ages 40–44, and “7” for ages 45–49.

**Marital Status.** Marital status can be used as a reliable predictor of sexual behavior. It is believed that women who are married are likely to have had sexual activity and less likely to utilize condoms. This category falls into four categories: Single, Married, Cohabiting, and Divorced/Separated/or Widowed. Theoretically the last category is lumped together as “Been Married” category, and is also together due to low numbers. The variables are coded “1” if they were never married, “2” if they are married, “3” if they are living together, and “4” if they are widowed, divorced, or separated.

**Educational Level.** Education is reported in three levels. In the category “no education,” the respondent may have attended school, but not graduated from primary-level schooling. The category “primary level” education refers to those who have graduated from primary-level schooling and may have some secondary-level schooling, but not graduated from secondary school. Those with secondary schooling have graduated from secondary schooling and may or may not have completed education beyond this level. The variables are coded “0” if the respondent has no education or not finished primary school, “1” if they have finished primary school and/or some secondary school, but have not finished, “2” if the respondent has finished secondary school, and/or some university school, or finished a university degree or higher.
**Wealth Index.** The wealth index is a composite index created by the DHS, utilizing the Filmer and Pritchett (1998) index. This index utilizes information on whether any member owns a radio, television, refrigerator, bicycle, motorcycle or car; whether electricity is used, the source of drinking water, the type of sanitation, how many rooms, and the type of materials used in dwelling construction. This index is broken down into five categories: poorest, poorer, middle, richer, and richest. It is strongly understood that people of richer strata have better access to information and resources and it is to be expected that those of higher wealth will have a better chance of adopting safer sexual behavior. This variable is coded “1” for the poorest category, “2” for poorer category, “3” for the middle category, “4” for the richer category, and “5” for the richest.

**Occupation.** Although occupation and wealth are often closely related, some occupations have a higher status that put people in good social network positions to get information without necessarily receiving a high income. Occupation is split into four categories: Professional, Middle Class, Unskilled, and Unemployed. People with higher-status jobs have more mobility to obtain information on HIV/AIDS prevention; however, it will also enable them to have more sexual partners as well. The DHS coded all variables in one of four possible classes of occupation. The variable is coded “1” for a professional occupation, “2” for middle class, “3” for unskilled labor, and “4” for not working.

**Region.** Within Honduras, populations in areas like the north coast with its thriving tourist industry and shipping lanes should have a greater likelihood of coming into contact with an outsider with the HIV infection. This variable is especially important due to the lack of information on such variables as ethnicity. Location can be utilized as a proxy measure for ethnicity due to large numbers of ethnic groups concentrated in particular areas of the country.
Administrative departments are combined into 4 categories: North Coast, West, Central, and South-East. The three departments making up the North Coast consist of Atlántida, Cortes, and Colon. The seven departments of La Paz, Intibucá, Gracias, Santa Barbara, Ocotepeque, Lempira and Copan make up the West, while the three departments of Francisco Morazán, Comayagua, and Yoro form the Central, and the four south and east departments are El Paraiso, Choluteca, Valle, and Olancho into the South-East which is combined together. The variable is coded “1” for North Coast, “2” for the West, “3” for the Central Region, and “4” for the South-East administrative districts.

**Number of Occupants in House.** Households with a greater number of occupants in the household could have fewer economic resources per person, causing women to engage in transactional sex. On the other hand, having a household with more occupants could create a “sentinel” atmosphere, allowing family members to look out for younger members to ensure that they do not engage in sexual activities with people whom they do not trust. This variable is divided into households of 1 to 2 occupants, a moderate family of 3 to 6, or an extended family of 7 or more. The variable is coded “1” if the household contains 1 or 2 occupants, “2” if there are 3–6 occupants, and “3” if it is 7 or more.

**Source of HIV/AIDS Information.** People take measure of not only the types of information given to them, but often the sources of that information. People may behave differently if this source is a face-to-face exchange rather than a distant source, such as mass media. This variable looks at two different ways the respondent learned about HIV/AIDS—through mass media, or social networks—and how this affects sexual behavior decision making. Volunteers in the study were asked, “Have you ever heard of AIDS?” Respondents who answered yes were then asked the follow-up question, “Where did you get this information?” The information was recorded and
this variable was assigned to all respondents as either having received this information (yes) or not receiving information (no). For this study, information from radio, television, newspapers/magazine, and pamphlets are combined into the category labeled mass media by combining the yes answers of the respondents. Originally, I had hoped not to combine the number of sources of either mass media or social network sources together, to see if there was a saturation point to changing behavior. However, these categories were combined because of a lack of numbers in categories, to make more robust numbers. The range of this variable is from “0” for no mass media sources listed as a source for HIV/AIDS information, to “1” if the individual responded that s/he had received HIV/AIDS information from any mass media. The variable social networks combined yes responses to receiving HIV/AIDS information from a community health worker, friend or family member, at church, and a co-worker together. The range of this variable is from “0” for no social network sources listed as a source for HIV/AIDS information, “1” if they received information from one social network source, and “2” if they received from more than one social network source for HIV/AIDS information.

Prior Knowledge of ABC Behavior as a Prevention to Contracting HIV/AIDS. Having access to preventative knowledge is an important first step in preventative HIV/AIDS behavior. To assess if the women in this study had this information, an open ended question was utilized in the HDHS, asking the subjects “What can be done to avoid AIDS?” The answers were then separated by the HDHS into different subject headings, of which three are being utilized in this study, namely those who answered, abstaining from sex, having only one partner, and using condoms. These three categories are being utilized in each of their matching regressions to act as a control, thus the answer, “abstaining from sex” category is being used in the abstinence
regression as a control, as the two other answers of “having only one partner” is utilized in fidelity, and using condoms, is used as a control for condom use.

**Women’s Perceived Ability to Negotiate Sex.** In many traditional societies women do not have the ability to negotiate if and when they want to have sexual intercourse—those decisions are often exclusively the male prerogative. In HIV/AIDS research, it is important to have an understanding of women’s ability to negotiate sexual intercourse with their partner to understand their ability to abstain and utilize condoms.

To measure women’s negotiating ability in the HDHS, a series of questions were asked of each woman at the household level with regard to their ability to deny sex to their partners. The following variations of the question were asked: “When can a woman deny sex with their partner?” were asked of all the women with the women responding yes or no to the following questions: When your husband has an STD? When your husband has another woman? If you have just recently given birth? or If the woman is tired or not in the mood?” To make a scale of these questions, factor analysis was employed using the correlation matrix and VARIMAX rotation to see if the four items formed a single dimension. A score of zero was the lowest level of women’s negotiating ability, and four was the highest level. This single factor captured 60.78% of the unrotated variance. The scale has good internal consistency (Cronbach’s alpha=0.772).

**Description of Variables**

The variables included in the 2005–06 Honduran Demographic and Health Survey data set provide rich possibilities for explaining or understanding what affects the safe sexual practices of the ABCs of HIV/AIDS prevention. Understanding all of the external forces that
limit and determine individual choice is important in grasping the effectiveness of HIV/AIDS prevention education.

The ABCs of HIV/AIDS prevention is captured in the three variables that measure abstinence, being faithful (fidelity), and condom use. Primary abstinence, or delaying the onset of sexual intercourse, is measured by looking at women aged 15–24 and whether they reported having had sex or not. Of the 4,668 women aged 15–24 (see Table 4.1), a majority of this age cohort is abstinent, with 4,015 reporting maintaining primary abstinence (86 %) and 653 reporting having had sex (14 %).

Looking at the Being Faithful category (Fidelity), of the 16,521 women who are sexually active, the majority of women are faithful to their partners, 14,671 (88.8 %) claiming only one sexual encounter in the last year and 1850 (11.2%) claiming multiple partners in the last 12 months. Condom use among women in the 2005–06 HDHS is very small. Of the 12,533 women who were sexually active and responded to this question, only 622 (5 %) used condoms on their last sexual intercourse, compared to 11, 911 (95 %) that did not.

It is critical to look at specific demographic and social aspects of individuals to understand how and why these women made these behavioral choices, and indeed, if they had the capacity to make these choices. Many women in Honduras may not have access to critical information, education, and family planning supplies needed for healthy sexual behavior, as well as the power dynamics with their partners to enact them.

Education is an important sociodemographic characteristic in understanding HIV/AIDS prevention. Women who have more education are more likely to prolong abstinence and have higher self-esteem (Lloyd et al. 2000; Mench et al. 2001).
Table 4.1
Percentage Distribution of Sociodemographics, Where HIV/AIDS Knowledge was Obtained, AIDS Knowledge, and Women’s Perceived Ability to Negotiate Sex for Women Between the Ages of 15-49, 2006 Honduras

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>%</th>
<th>Range</th>
<th>SD</th>
<th>Median</th>
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<tbody>
<tr>
<td><strong>Safe Sex Behavior</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Primary Abstinence</td>
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</tr>
<tr>
<td>Abstinent</td>
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<td>86.0</td>
<td>0 – 1</td>
<td>0.49</td>
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<td>653</td>
<td>14.0</td>
<td>0 – 1</td>
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<td></td>
</tr>
<tr>
<td><strong>Fidelity</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Only Partner</td>
<td>14671</td>
<td>88.8</td>
<td>0 – 1</td>
<td>0.32</td>
<td></td>
</tr>
<tr>
<td>Multiple Partners</td>
<td>1850</td>
<td>11.2</td>
<td>0 – 1</td>
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<td><strong>Condom Use</strong></td>
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<td>Used Condom</td>
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<td>0 – 1</td>
<td>0.22</td>
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<td>0 – 1</td>
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Women's Perceived Ability to Negotiate

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Honduran women tend to have lower education; of the 19,948 women, 6,932 (34.8%) have not completed primary education, while 9,911 (49.7%) have completed primary education, and only 3,105 (15.6%) have completed secondary education or higher.

The age range of respondents seems to reflect what one would expect to see in a developing country—a higher percentage of the respondents are in the younger age ranges. Of the age ranges, there are 8,239 respondents in the 15–24 age range (41.3%), 5,949 (29.8%) in the
25–34 age range, and 5,760 (28.9%) among the 35–49 ages. Marriage is a very important variable when looking at sexual behavior, as well as possible sexual inequities. Of all of the respondents in this survey, 5,563 (27.9%) report never having been married, 4,838 (24.3%) are currently married, 6,775 (34%) are cohabiting, and 2,772 (13.9%) report that they have been married (divorced, separated, or widowed).

Where one lives can determine exposure to HIV/AIDS, as well as resources to treat it, or education to prevent it. For the women from the north coast, where most of the Garifuna live, there is increased tourism and ports of entry for shipping lanes, making it more possible to encounter HIV/AIDS infected people. In this survey 5,779 (29%) reported living in the north coast, while 3,770 (18.9%) come from the west; 6,688 (33.5%) come from central Honduras, and 3,710 (18.6%) come from the south and east of Honduras.

Being in a rural or urban location can also determine whether respondents have access to information, medical treatment, or transportation to important resources for preventing HIV infection and AIDS treatment. People from rural populations do not have the same access to these resources as urban populations. In the HDHS, 9,217 (46.2%) are listed as living in a rural area, while 10,731 (53.8%) responded that they live in an urban area.

Having money often determines access to resources, such as education, information, and treatment. Of the respondents in the HDHS, 3,020 (15.1%) reported being in the poorest quintile, while 3,449 (17.3%) were in the poorer quintile. Working up this scale, 4,040 (20.3%) were in the middle, while 4,637 (23.2%) were in the richer category, and 4,801 (24.1%) were in the richest quintile.

Having a specific occupation or an occupation at all can give one further access to possible HIV/AIDS prevention information. Of the respondents, 9,855 (49.4%) reported not
being employed, while 3,811 (19.1%) reported an unskilled job. A total of 5,026 (25.2%) reported having a middle-class job, while 1,255 (6.3%) reported a professional occupation.

Coming from a larger household can be potentially more advantageous for sources of information, or may be detrimental by decreasing each individual’s portion of the household resources. In this study, only 914 (4.6%) reported coming from a household of 1–2 occupants, while 12,237 (61.3%) come from a household of 3–6 occupants, and 6798 (34.1%) have 7 or more occupants in their household.

Understanding how someone receives information is important to understanding where to allocate scarce resources. This study looks at two different sources of information, mass media (television, radio, newspapers/magazines, and pamphlets) and social networks (community health worker, friends/family, church, and co-worker).

These variables measure how many different sources of information the respondent received from mass media and social networks. When looking at mass media as a source of HIV/AIDS prevention information, 9,081 (46.6%) did not receive any information from mass media sources, while 10,395 (53.4%) received information from one or more sources. When looking at social networks, many respondents did not receive any information from their close contacts, with 3,224 (16.6%) in this survey not receiving any information from their social networks. Another 6,889 (35.4%) only talked about HIV/AIDS prevention with one source in their social network. However, almost half of the respondents to this survey, 9,364 (48.1%) have utilized multiple social networks for HIV/AIDS information.

Having prior knowledge of HIV/AIDS risks can affect sexual behavior. That is why it is important to know what information these women have received regarding HIV/AIDS. The
variable for HIV/AIDS knowledge is whether or not the individual has articulated whether abstinence, fidelity, or condom use is a manner in which they can prevent HIV/AIDS infection.

Looking at HIV/AIDS prevention knowledge, many women seem to be lagging behind in knowing that certain behaviors can prevent HIV/AIDS infection. Only 6,048 (30.3%) of women knew that abstaining from sex could prevent HIV/AIDS, while 9,277 (46.5%) knew that having only one partner could prevent HIV/AIDS infection. The last category of the ABC’s, condom use, shows that only 5,784 (30%) of Honduran women know that the use of condoms can prevent HIV/AIDS infection.

Women do not always have the luxury of choice when it comes to sexual behavior. To understand women’s ability to negotiate sexual intercourse, one can look at their perceived negotiating power with their partners to deny them sex. A t-test shows that Honduran women strongly believe that women have the right to deny sex to their partners (mean of 3.75).

**Bivariate Analyses**

Especially when it comes to making sexual decisions, individuals do not always choose their behavior based on rational decisions. Many variables can unconsciously push or limit an individual’s decisions, including access to information, education to conceptualize the problem, conservative norms on communicating about sex, access to family planning and medical care, and traditional power dynamics in sexual relationships. Different belief systems and lifestyles, and access can be conceptualized by understanding the environment in which the individual lives. Rural areas tend to hold more conservative views on gender roles and lack access to vital HIV/AIDS prevention resources. This is one reason that it is especially critical to understand how place of residence affects sexual behavior and sociodemographic characteristics.
The dependent variables looking at the ABCs of preventive sexual behavior all significantly differ between rural and urban and show that the first dependent variable, primary abstinence, has a higher percentage in rural areas, with 87.8% of people in this group never having had sex, compared to 84.8% of urban women aged 15–24 (see Table 4.2). Being faithful (Fidelity) has a higher percentage in rural areas, with 91.1% being faithful to their partners in comparison to 86.7% of urban women. The last dependent variable, condom use, shows that a higher percentage of urban women use condoms compared to rural women, 6.6% and 3.3%, respectively.

When looking at sociodemographic variables, all were found to be significant with the exception of age. Rural women are more likely to lack a primary education, with 51.5% of women in rural areas reporting not having completed primary education compared to 20.3% of urban women. Urban women also are more likely to have completed primary education (54.5%), compared to rural women at 44.1%. No other category shows the disparity in education more than the secondary or higher category, where 25.2% of urban women have completed secondary school, compared to only 4.4% of rural women.

Differentials in rural and urban areas can be seen in the traditional values of marriage. In the urban sample, 31.2% of the women have never been married, compared to 24.1% of rural women. A higher percentage of rural women are married (26.3%) compared to 22.5% in urban areas. A higher percentage of rural women are also joined in “Free-Unions” or cohabitation—38% compared to 30.5% in urban areas. Finally, a higher percentage of urban women have been married (15.8%), compared to 11.6% of rural women.
Table 4.2

Bivariate Relationships of Place of Residence to Sociodemographics, Where HIV/AIDS Knowledge was Obtained, HIV/AIDS Knowledge, and Woman’s Perceived Ability to Negotiate Sex and Safe Sexual Practice Among Women Between the Ages of 15-49, 2006 Honduras

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***=p<.001, **p<.005, *p<.05, †p<.1

Regions have a different percentage of rural and urban populations. On the north coast, 38.4% of the respondents are urban, compared to 18.1% who are rural. The western part of Honduras is the most rural area, with 31.4% of the people in this study compared to only 8.1% urban. With the capital and other cities in the central part of the country, it is not surprising that it also has a high percentage of urban respondents at 42.6%, while 22.9% are rural. In the southern and eastern regions, 10.9% were urban, compared to 27.6% rural.

No other category highlighted the differences between rural and urban respondents like the resource disparities revealed through the survey’s wealth index. In the poorest quintile, rural respondents composed 32% of the survey, compared to only 0.7% of urban respondents. The second poorest quintile also evidenced a difference in disparity, with 32% of rural respondents
making up this category, compared to only 4.6% of urban respondents. The middle quintile was basically equal, with 19.3% of urban respondents making up this category, compared to 21.4% of rural respondents. Again, the disparity in resources appears in the two top quintiles, with 33.3% of urban respondents making up the richer quintile, compared to only 11.5% of rural respondents. When considering the richest quintile, 42.1% of urban respondents were in this category, compared to only 3.1% of rural respondents.

The second category exhibiting high disparities was occupation, with three times as many urban respondents being in a professional occupation: 9.4% of urban respondents compared to only 2.7% of rural respondents. Many urban respondents were also in the middle class—30.4% compared to 19.1% of rural respondents. Unskilled labor was equal for both urban and rural respondents, at 19.1%. When it came to unemployment, 59.1% of rural respondents were unemployed, compared to 41.1% of urban women.

A higher percentage of rural respondents also lived in more crowded conditions. With regard to smaller occupancy households of 1–2 people, 5.8% of urban residents compared to 3.1% of rural respondents were included. In moderately occupied houses of 3–6 occupants, urban respondents made up 66.8% of this category and rural respondents, 55%. In the most crowded households with 7 or more occupants, 41.9% of rural respondents and 27.4% of urban respondents were in this category.

Urban respondents have a greater percentage of prior knowledge of HIV/AIDS prevention knowledge than rural residents. When answering the open-ended question, “What can be done to avoid AIDS?”, 34.1% of urban respondents answered abstinence as a means to prevent HIV/AIDS, compared to 26% of rural residents. Of those who answered having only one partner, 50.6% of urban women listed fidelity as a means of preventing HIV/AIDS, while 41.7%
of rural women answered fidelity. Of those who answered, using condoms as a way to prevent HIV/AIDS infection, 32.4% of urban respondents answered condom use as a means to prevent HIV/AIDS infection, while 25% rural respondents answered this way.

Looking at how respondents received their HIV/AIDS prevention information, through mass media and social networks, there are differences between rural and urban respondents in mass media access/use. Of those who received no HIV/AIDS prevention information from mass media, 49.8% were urban and 42.8% of were rural residents. A higher percentage of rural respondents had one or more mass media sources, with 57.2% of rural respondents claiming one or more mass media sources, to 50.2% of urban respondents.

Those who did not utilize their social networks for HIV/AIDS prevention information were almost equally split between urban and rural residents; with 17.3% of urban residents and 15.6% of rural residents not utilizing any social networks for HIV/AIDS information. For Hondurans, 22.9% of urban residents utilized one social network source, while 50.5% of rural residents did so. Looking at multiple social network sources, 59.8% of urban residents utilized multiple sources, while 33.9% of rural residents did so.

With regard to women’s perceived ability to negotiate sex; there was a higher mean for women in urban settings refusing sex than women from rural settings. Women from urban settings had a mean of 3.79, compared to women from rural settings with a mean of 3.69, for believing that women have the right to deny sex to their partners.

Age was distributed very evenly in this survey sample, with the mean age difference between urban and rural residents only off by one one-hundredth. Urban residents had a mean of 28.52, while rural residents had a mean of 28.53. However, this score is insignificant.
Chapter 5

Quantitative Findings

This chapter discusses the analyses of the dependent variables, the ABC HIV/AIDS risk behavior of abstinence, fidelity, and condom use. This section begins with bivariate analyses of the three risk factors to better understand how each variable on its own interacts with different independent variables, and then concludes with the multivariate analyses of behavior to better understand how all of the variables work together with the dependent variables.

Bivariate Analysis of Primary Sexual Abstinence

This section describes hypothesized determinants of primary sexual abstinence among Honduran women in this study aged 15–24. This section, first describes the sociodemographic characteristics used in this bivariate analysis. Then it describes Honduran women’s prior knowledge of abstinence as a way to prevent HIV/AIDS infection, women’s perceived ability to negotiate sex, and the possible advantage to the medium in which they obtain HIV/AIDS information. This analysis allows for a better conceptualization of what sociodemographic variables may influence and/or interact with HIV/AIDS prevention knowledge, women’s perceived ability to negotiate sex, and their source of HIV/AIDS information to influence their sexual behavior.

Looking at primary abstinence for women 15–24, the study sample consists of 4,670. Of all of the different variables relating to sociodemographics, prior knowledge that abstinence can prevent HIV/AIDS, women’s ability to negotiate sex, and their source of HIV/AIDS information, significance was found for all variables with the exceptions of the sociodemographic variable of
wealth and age, having prior HIV/AIDS prevention knowledge, and having the source of HIV/AIDS knowledge come from a social network (see Table 5.1).

**Table 5.1**

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>% Reporting Abstinence</th>
<th>Chi-Square (X²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of Residence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>84.8</td>
<td>8.19**</td>
</tr>
<tr>
<td>Rural</td>
<td>87.8</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Education</td>
<td>81.3</td>
<td>23.76***</td>
</tr>
<tr>
<td>Primary Education</td>
<td>87.7</td>
<td></td>
</tr>
<tr>
<td>Secondary Education or High</td>
<td>83.5</td>
<td></td>
</tr>
<tr>
<td>Wealth Index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poorest</td>
<td>86.8</td>
<td>5.37</td>
</tr>
<tr>
<td>Poorer</td>
<td>87.7</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>87.1</td>
<td></td>
</tr>
<tr>
<td>Richer</td>
<td>84.6</td>
<td></td>
</tr>
<tr>
<td>Richest</td>
<td>85.2</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Coast</td>
<td>83.5</td>
<td>19.46***</td>
</tr>
<tr>
<td>West</td>
<td>88.2</td>
<td></td>
</tr>
<tr>
<td>Central</td>
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<td></td>
</tr>
<tr>
<td>South-East</td>
<td>89.5</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
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</tr>
<tr>
<td>Professional</td>
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<td>Middle Class</td>
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<td></td>
</tr>
<tr>
<td>Unskilled</td>
<td>82.2</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>90.1</td>
<td></td>
</tr>
<tr>
<td>Number of Occupants in House</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 2</td>
<td>73.5</td>
<td>18.24***</td>
</tr>
<tr>
<td>3 to 6</td>
<td>87.1</td>
<td></td>
</tr>
<tr>
<td>7 to more</td>
<td>85.3</td>
<td></td>
</tr>
</tbody>
</table>

(N=4670)
Table 5.1
Continued from Previous Page

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>% Reporting Abstinence</th>
<th>Chi-Square (X²)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mass Media</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Source</td>
<td>88.8</td>
<td></td>
</tr>
<tr>
<td>One or More Sources</td>
<td>81.5</td>
<td></td>
</tr>
<tr>
<td><strong>Social Networks</strong></td>
<td></td>
<td>1.87</td>
</tr>
<tr>
<td>No Source</td>
<td>87.1</td>
<td></td>
</tr>
<tr>
<td>One Source</td>
<td>86.0</td>
<td></td>
</tr>
<tr>
<td>Multiple Sources</td>
<td>85.3</td>
<td></td>
</tr>
<tr>
<td><strong>AIDS Knowledge</strong></td>
<td></td>
<td>0.09</td>
</tr>
<tr>
<td>Prior knowledge of abstinence</td>
<td>85.8</td>
<td></td>
</tr>
<tr>
<td>No prior knowledge of abstinence</td>
<td>86.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Women's Ability to Negotiate</th>
<th>Abstinent Mean</th>
<th>SD</th>
<th>Sexually Active Mean</th>
<th>SD</th>
<th>Student t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>3.82</td>
<td>0.559</td>
<td>3.59</td>
<td>0.892</td>
<td>285.212***</td>
</tr>
<tr>
<td>Age</td>
<td>17.71</td>
<td>2.47</td>
<td>19.72</td>
<td>2.56</td>
<td>5.01*</td>
</tr>
</tbody>
</table>

***=p<.001, **p<.005, *p<.05, †p<.1 This data utilizes DHS weights

The difference in residency underlines the importance of local differences in sociodemographic characteristics of women, as well as how they differ in sexual attitudes and safe sex practices. A higher percentage of rural women responded that they retained their primary abstinence more than rural women, 87.8% compared to 84.8% of urban respondents.

Education is curvilinear in maintaining primary abstinence. Women who had not completed primary education had the lowest levels of abstinence, at 81.3%, while those who had completed their primary education have the highest level of primary abstinence at 87.7%. The level for women maintaining their primary abstinence decreased for women who had completed secondary education to 83.5%.

As with education, there was a curvilinear response for economic status to maintaining primary abstinence; however, this variable was insignificant. Among women at the richest level,
85.2% reported abstinence, compared to 84.6% of the richer economic group, and 87.1% of the middle class. Of the two poorest levels of the wealth index, women in the poorer wealth category, 87.7% reported primary abstinence, compared to the women in the poorest wealth category who reported 86.8%.

Geographic areas in Honduras may determine not only access to health facilities and transportation, but often the prevalence of indigenous groups in certain areas (Meskito Indians to the east, as well as the Pech, and the Garifuna to the north), more so than others. The north coast and the central region have lower percentages of abstinence, the north coast having 83.5% and the central region having 85.2% compared to the west having 88.2% and the south-east having 89.5%.

Elaborating on respondents’ occupations, the results are difficult to comprehend due to respondent age range (15–24). Many of the women were still in school and at their age, were not able to obtain professional jobs. However, women in skilled occupations had the lowest levels of primary abstinence when compared to those not employed or in unskilled positions, professional women reported 80.5% primary abstinence, while 79.4% of women in middle occupational positions reported primary abstinence. Those women who were in unskilled occupations reported 82.2% abstinence, while women who are unemployed had 90.1% abstinence.

Living in a house with many occupants may deplete resources; however, it may also increase social networks and therefore increase access to preventative information. When looking at the number of occupants in the household, it was shown that for women, with regard to primary sexual abstinence, the results were curvilinear. Women from a household of 7 or more occupants had an abstinence percentage of 85.3%, compared to women in a household of 3–6 occupants at 87.1% and households of 1–2 occupants at 73.5%.
In evaluating the effects of the different sources of knowledge, between mass media and social networks, one sees that primary abstinence decreases for both categories as the number of sources increases. Analyzing the influence of mass media HIV/AIDS informational sources, women who reported no access or attention to mass media sources had an 88.8% abstinence rate, while those who reported access/attention to one or more sources of mass media had an 81.5% rate.

Information gathered from social networks on HIV/AIDS showed that this category also decreased, like the mass media category. Women who reported receiving no information from their social networks had 87.1% primary sexual abstinence, compared to one source (86%). Those who reported receiving HIV/AIDS information from multiple sources had the lowest percentage at 85.3%, the lowest of those reporting primary sexual abstinence. However, this variable was insignificant.

Having prior knowledge of abstinence as a means of preventing HIV/AIDS infection does not increase abstinence; in fact, it increases sexual activity. Women with prior knowledge that HIV/AIDS can be prevented by abstinence had an 85.8% abstinence rate, in comparison to those without prior knowledge (86.1% abstinence rate), but this variable is not significant.

Many women do not believe that they have the right to negotiate sex with their partners, which is critical to maintaining primary abstinence. Women who believed that it was all right for women to deny men the right to have sex with them, had higher rates of abstinence. Those who were abstinent had a mean of 3.82—that is, they answered in the affirmative that women had the right to deny their partners sex—compared to those who had sex having the (mean of 3.59).

Older women tended to be more sexually active. Women who were abstinent had a mean of 17.71 years of age, compared to women who were sexually active, with a mean of 19.72.
Discussion of Bivariate Analysis of Abstinence

Women from urban areas intermix with more people in their environments and tend to be progressive, while women in rural areas tend to be more conservative and isolated. This could explain why women from rural setting have higher levels of maintaining their primary abstinence.

The relationship between education and abstinence is curvilinear. Perhaps this shows that women who have dropped out or never had education do not have the same life goals, unlike someone who is pursuing an education, may not prone to having sex. Women who have completed primary school are interested in continuing through secondary school and want to delay sexual activity, while those who have completed secondary school, have already achieved their educational goals, and are ready to find a partner and have sex.

The relationship between economic status and abstinence is also curvilinear. Women in the poorest quintile may be desperate for resources or not have many choices about maintaining their primary abstinence, while women in the poorer and middle quintiles have enough financial security to maintain the option to engage in abstinence. Women in the richer and richest quintile have enough resources to be more mobile and meet more people, perhaps giving them more opportunity to engage in sexual intercourse. However, this variable is insignificant.

A higher percent of women who are unemployed report abstinence compared to women who work. This could be due to the women who are not working not having regular exposure to men, so they are not tempted to have sex, unlike women who work. However, much more likely is the possibility that this could be capturing women who are in school and have life-goals in finishing school before sex.
The relationship between number of occupants who occupy a house and abstinence is also curvilinear. Those women living in a household with one or two occupants are probably more likely to be in a sexual relationship, while women in a household of three-to-six are probably living in a family setting, where the family can keep an eye on young women. Living in a bigger family could mean that the family has become too big to be kept track of, and therefore women are more able to engage in sexual activity. However, these variables are insignificant.

Looking at how women receive HIV/AIDS information shows that with both mass media and social network sources, a higher percentage of women who have access are having sexual intercourse. This could be because women who have more access to social networks and mass media are also getting mixed information on sex and receiving more exposure to the opposite sex. This could also be showing women who are interested in having sex and are accessing their information networks to try to find out more about the subject matter before engaging in it.

This access to mixed messages could also help explain why women who have prior knowledge of abstinence as a way to prevent HIV/AIDS infection have higher rates of sexual intercourse. Women exposed to more information could also be being exposed to more mixed information also.

Women who have higher rates of believing that women have the right to deny sex to men also tend to be more abstinent than women who do not share these beliefs. Women, who do not feel that they have the right to deny sex to men, are probably less likely to ask them not to have sex. However, the difference between these variables is very small.

Women who have had sex tend to be older than those who have maintained their primary abstinence. Women who are older have had longer exposure to the possibility to having sex and therefore have had more opportunity for sex than younger women.
Bivariate Analysis on Being Faithful or Fidelity to Partners

**Table 5.2**
Bivariate Relationships of Sociodemographics, Where HIV/AIDS Knowledge was Obtained, AIDS Prevention Knowledge, and Women's Perceived Ability to Negotiate Sex with Fidelity Among Sexually Active Women Between the Ages of 15-49, 2006 Honduras (N=16521)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Condom Use</th>
<th>Reporting Fidelity</th>
<th>Chi-Square ($X^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Place of Residence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>86.7</td>
<td>81.86***</td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>91.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td>4918***</td>
</tr>
<tr>
<td>Never Married</td>
<td>46.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>97.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabitating</td>
<td>99.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Been Married</td>
<td>65.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
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<td>76.9***</td>
<td></td>
</tr>
<tr>
<td>No Education</td>
<td>91.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Education</td>
<td>87.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary Education or</td>
<td>85.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wealth Index</td>
<td></td>
<td>77.74***</td>
<td></td>
</tr>
<tr>
<td>Poorest</td>
<td>92.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poorer</td>
<td>90.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>88.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richer</td>
<td>86.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richest</td>
<td>87.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td>34.77***</td>
<td></td>
</tr>
<tr>
<td>North Coast</td>
<td>87.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>91.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>88.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South-East</td>
<td>89.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td>225.1***</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>88.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle Class</td>
<td>86.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unskilled</td>
<td>83.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>92.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Preliminary results of the ABC prevention campaign in areas of the world that have been hit hard by the HIV/AIDS pandemic have shown that to slow down or stop the spread of HIV/AIDS infection, perhaps no other variable is more important than “being faithful” or limiting sexual activity to monogamous relationships. In this research, this variable is measured as women who are sexually active that have only had sex with their husband or partner in the last 12 months.

By looking at the independent variables of sociodemographics, preventative HIV/AIDS knowledge, the medium that the respondents received their HIV/AIDS information from, and women’s perceived ability to negotiate sex, one gets a better understanding of the dependent variable of risky sexual behavior. All of the independent variables in this bivariate analysis are significant.

Place of residence shows that rural residents have a higher percentage of fidelity than those who come from urban residency. Women from rural areas have 91.1% fidelity compared to urbanites having 86.7% reporting fidelity. (See Table 5.2.) Women who are not in a socially sanctioned relationship have higher percentages of multiple partners in comparison to those women who are married or cohabiting. Looking at the numbers, Forty-six point one percent of women who had never been married practiced fidelity in the last year, compared to 97.1% of married women, 99.3% of cohabiting women, and 65.3% of those who had been married.

Women with higher education reported lower percentages of fidelity, compared to those women less educated. Women who have not completed primary education have a higher percentage of fidelity to those with education, with 91.3% responding that they have only
Table 5.2
Continued from Previous Page

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>% Reporting Fidelity</th>
<th>Chi-Square ($X^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Occupants in House</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 2</td>
<td>85.3</td>
<td></td>
</tr>
<tr>
<td>3 to 6</td>
<td>90.2</td>
<td></td>
</tr>
<tr>
<td>7 or more</td>
<td>86.6</td>
<td></td>
</tr>
<tr>
<td><strong>Mass Media</strong></td>
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<td></td>
</tr>
<tr>
<td>No Source</td>
<td>87.8</td>
<td>9.83**</td>
</tr>
<tr>
<td>One or more Sources</td>
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<tr>
<td><strong>Social Networks</strong></td>
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<td>No Source</td>
<td>85.5</td>
<td>46.75***</td>
</tr>
<tr>
<td>One Source</td>
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<td></td>
</tr>
<tr>
<td>Multiple Sources</td>
<td>88.3</td>
<td></td>
</tr>
<tr>
<td><strong>AIDS Knowledge</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Know Fidelity can prevent AIDS</td>
<td>89.6</td>
<td>11.42***</td>
</tr>
<tr>
<td>Does not know fidelity can prevent AIDS</td>
<td>88.0</td>
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<table>
<thead>
<tr>
<th></th>
<th><strong>Fidelity</strong></th>
<th></th>
<th><strong>Multiple Partners</strong></th>
<th></th>
<th><strong>Student t-test</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Perceived Ability to Negotiate Sex</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.77</td>
<td>0.70</td>
<td>3.74</td>
<td>0.68</td>
<td>10.34**</td>
</tr>
<tr>
<td>Age</td>
<td>31.73</td>
<td>8.91</td>
<td>27.47</td>
<td>8.69</td>
<td>7.23**</td>
</tr>
</tbody>
</table>

***=p<.001, **=p<.005, *=p<.05, †p<.1 This data utilizes DHS weights

one partner. Eighty seven point six percent of women who had completed primary education were engaged in fidelity and 85.6% of women with secondary education or higher were engaged in fidelity.

With regard to wealth and fidelity, as wealth increased, so did the percent having multiple partners with the exception of the richest quintile. The poorest quintile of this study had the highest percentage of fidelity, compared to the rest of the quintiles—92.6% vs. 90.5% for the poorer quintile—while 88.6% of the middle practiced fidelity. Of the richer quintiles, the richer
quintile reported the lowest percentage of fidelity of all quintiles at 86.3%, while the richest quintile reported a slight increase in fidelity in comparison to the richer quintile at 87.4%.

Location shows that women’s environment can have an effect on their fidelity. People living on the north coast had the lowest percentage of fidelity compared to the rest of Honduras, at 87.2%, to the central region at 88.3%, the south-east at 89.8% and the west at 91.2%.

The association between occupation and fidelity is curvilinear, showing the highest level of fidelity with unemployed women, followed by professional occupations. Whereas 88.5% of women in a professional occupation practiced fidelity, 86.1% of women in middle class occupations practiced fidelity. Finally, 83.6% of women in middle class occupations practiced fidelity as did 92.5% of unemployed women.

Focusing on the number of occupants in a household and the association between number of household members and fidelity, those living in a household of 1–2 occupants had 85.3% fidelity, compared to 3–6 occupants having 90.2% and 7 or more at 86.6%.

When looking at sources of HIV/AIDS information, those who have utilized mass media for HIV/AIDS information were more likely to engage in fidelity. Most women with no sources of mass media (87.8%) practiced fidelity compared to 89.4% of those with one source or more. Women who have utilized a social network as a source of HIV/AIDS knowledge show that receiving HIV/AIDS information from one close social contact is associated with fidelity more so than having no HIV/AIDS information from social networks or having information from multiple social network sources. Those people who have not used any of their social networks for HIV/AIDS knowledge report 85.5%, compared to one source at 90.6% and multiple sources at 88.3%.
HIV/AIDS prevention knowledge shows that among those with greater HIV/AIDS knowledge, those who believe that having only one partner can prevent HIV/AIDS infection are slightly more likely to be faithful than those that do not have this knowledge. Women who believed in fidelity as one method of preventing HIV/AIDS had a 89.6% fidelity rate compared to those who did not know this, at 88%.

Women who were more likely to believe that they could deny sex to men had higher rates of fidelity than women who were less likely to believe that they could deny sex to men. Women who were faithful had a higher mean at 3.77, compared to women who were unfaithful, at 3.74.

Women who are faithful to their partners tend to be older than those who are not faithful to their partners. Women who were faithful to their partners had a mean age of 31.73, compared to those women who were not faithful—for this group, the mean age was 27.47.

Discussion of Bivariate Analysis of Fidelity

Rural women, because they are surrounded by neighbors and family members, probably do not have opportunities to be unfaithful without multiple people knowing. Rural women also are more likely to have more conservative values than urban women and have the cultural push to be more faithful.

I higher percentage of women who are in socially sanctioned relationships engage in fidelity than those who are not. This is shown by women who are married or cohabiting (which in Honduras is mostly accepted as a socially sanctioned contract). Women may be expected to try their utmost to keep their marriage intact and are willing to work harder at their relationship than women who aren’t in a socially sanctioned relationship.

Women who have higher education levels have lower levels of fidelity—this is probably because educated women are more likely to have access to multiple partners. Educated women
are also more likely to have their own autonomy and the confidence to seek out other partners if their marriage is not working.

Women with higher economic status more likely have access to more partners, which could explain why a higher percent report infidelity. Economic freedom/ not needing to rely on a partner for resources is another reason why women who have higher economic status are more likely to engage in infidelity.

The north, with its tourism, and the central region, with capital, have the greatest extent of inter-mixing of people, which could allow infidelity to occur. The west and the south-east are more isolated and do not have much tourism and therefore do not allow the same opportunities for unfaithfulness.

In looking at occupation, findings reveal that women who are professional may be able to be more economically stable and not need added resources, while unemployed women are more homebound and dependent on their partner for economic resources. Consequently, women in middle and unskilled occupations may have the opportunity to meet other people to cheat with and have some economic stability to enable them to be independent enough to make their own decisions to find additional partners, than unemployed women do.

Our review of the number of household occupants for women shows that the size of the household is curvilinear in its results to fidelity. Women from the smallest households have the highest rates of infidelity, probably because they do not have anyone monitoring them, while a larger household does. However, once a household becomes too large, they lose this monitoring effect because there may be too many people to keep track of.

Investigating how sources of HIV/AIDS information affect fidelity; we see that those who have access to mass media have less fidelity than those with no access. This could be
because even though the Honduran women are receiving HIV/AIDS information from the mass media, they could also be receiving other messages from the media that could entice them to have sex also.

In looking at women utilizing social networks for HIV/AIDS information, women who utilize one source of information have more fidelity than those who do not utilize any sources or those with multiple sources. This could be because those who do not utilize social networks do not feel comfortable talking about sexual themes and may feel socially isolated, making them more apt to have multiple partners. Women who utilize multiple social networks could be getting mixed messages about sexuality from their friends, making them want to experiment more with other partners.

Having prior knowledge that fidelity can prevent HIV/AIDS infection does not make women more likely to be faithful. Women who have prior knowledge of fidelity as a means to prevent HIV/AIDS infection also probably have access to more information in general and are probably getting mixed messages from the media on sexuality, negating some effects of the prevention knowledge may have had in increasing fidelity. However, the percentage reporting in these variables are very close.

Women who have stronger beliefs in their ability to deny men sex, also have more fidelity. This could be due to trust and autonomy issues. If women feel they can trust themselves to deny men sex, they may have more trust and communication with their husbands, making them more likely to be happy in their relationship. However, the difference between the two means of these two variables are only by 0.03.
As women age, they tend to feel more fidelity towards their partners. This could be due to women who are older having other family obligations, such as caretaking of children and the elderly, which puts other social pressures on them not to have affairs.

**Bivariate Analysis of Condom Use at Last Intercourse**

This section first describes the sociodemographic characteristics used in this bivariate analysis. Furthermore, it describes Honduran women’s HIV/AIDS prevention knowledge, their perceived ability to make sexual decisions, and the possible advantage to the medium in which they obtain their HIV/AIDS information. Finally, these variables are evaluated using bivariate associations between sociodemographic variables, women’s HIV/AIDS prevention knowledge, women’s perceived ability to refuse sex, and source of HIV/AIDS information, using chi-square tests of independence and student t-tests. This analysis allows for a better conceptualization of what sociodemographic variables may influence and/or interact with HIV/AIDS knowledge, women’s perceived ability to refuse sex, and their source of HIV/AIDS information to influence their condom use.

Condom use depends on many factors that are not controllable by women, including access, power dynamics, and getting the information needed to make the correct decisions. Understanding variables that are beyond their control can give critical insight in the limitations they may have in their sexual behavior.

Place of residence can determine many choices for women when it comes to sexual behavior, including access to information and condoms. Of the women who used condoms upon their last sexual intercourse, twice the percentage of urban women used condoms in comparison to rural women, 6.6% compared to 3.3% (see Table 5.3). However, both rural and urban condom use is very low.
Marital status shows that those who are not in a committed relationship are more likely to use a condom. Women who have never married have the highest percentage of condom use at their last sexual intercourse of any variable, 23.6%, compared with married women who report condom use, 4.2%, cohabiting women, 2.8%, and those that have been married are, 11.0%.

As education rises, so does the percentage of women using condoms. Women who did not complete primary education, report 3.1% condom use, compared to 5.5% of women who completed primary school and 8.7% of women who have finished secondary school or higher.

Those with wealth have higher percentages of condom use than those who are poorer. In the poorest quintile, 2.0% report condom use at last sexual intercourse as compared to the next quintile up having 3.1%, and the middle class having 5.2%. The richer quintiles continue the increased percentage of condom use, with the richer quintile reporting 6.1% condom use and the richest having the highest percentage of reported condom use at 7.6%.

In regard to region, those regions that have the highest reported rates of HIV/AIDS infection also have the highest condom use. The north coast reported the highest percentage of condom use at 5.9%, and the central region had the second highest percentage of condom use at 5.5%, as compared to the west at 4.2% and the south-east at 3.4%.

Women at higher occupational levels are more likely to report using condoms than women who do not work. Those in professional occupations had the highest percentage of reported condom use, at 7.8%, as compared to those in middle-class jobs at 6.7%. Those in the lower working class or the unemployed continued to report less condom use, with unskilled occupations reporting 5.5% condom use, and the unemployed, 3.5%.

When one considers the number of occupants in the household, those houses with more occupants report a higher percentage of condom use. A total of 4.7% of women from houses with
1–2 occupants reported condom use, as compared to women from a house of 3-6 occupants at 5.0% and households of 7 or more at 5.0%. However, this variable was found to be insignificant.

Much like mass media, information from social networks have the same effects in decreasing the percentage of condom use among women. The more information from social networks the women gather, the lower the percentage of condom use they report as compared to no sources from their social network. Women with no social networks for HIV/AIDS information reported 5.2% condom use, as compared with one source reporting 3.4%, and those using multiple social networks for HIV/AIDS prevention information totaled 6.2%.

Results regarding those who know that condom use can help prevent HIV/AIDS infection showed that those with this knowledge were more likely to use condoms than those who did not have this information. Those who had prior knowledge that condom use can prevent HIV/AIDS totaled 6.4%, while those who did not know this totaled 4.3%.

Women with stronger beliefs in the ability of women to deny men sex are slightly more likely to use condoms. Women who used condoms had a mean of 3.78, compared to those women who did not with a mean of 3.77. However, this variable was not significant.

Condom use among women tended to occur among women who were younger. Women who used condoms had a mean of 28.67 years, compared to women who did not with the mean of 30.85 years.
**Table 5.3**

Bivariate Relationships of Sociodemographics, Where HIV/AIDS Knowledge was Obtained, AIDS Knowledge, and Women's Perceived Ability to Negotiate Sex with Condom Use Among Sexually Active Women Between the Ages of 15-49, 2006 Honduras (N=12547)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Condom Use</th>
<th>% Reporting Condom Use</th>
<th>Chi-Square ($\chi^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place of Residence</td>
<td>68.89***</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>572.9***</td>
<td>23.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Never Married</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cohabitating</td>
<td>11.0</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td>92.87***</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Education</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary Education</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Secondary Education or High</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td>Wealth Index</td>
<td>105***</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poorest</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poorer</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middle</td>
<td>6.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Richer</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Richest</td>
<td>7.6</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>25.04***</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>North Coast</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Central</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>South-East</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>62.63***</td>
<td>7.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Middle Class</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unskilled</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>5.5</td>
<td></td>
</tr>
</tbody>
</table>
Table 5.3
Continued from Previous Page

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Condom Use</th>
<th></th>
<th>Chi-Square ($X^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Reporting Condom Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Occupants in House</td>
<td>0.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 2</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 to 6</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 or more</td>
<td>5.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass Media</td>
<td>2.92*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Source</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One or more Sources</td>
<td>4.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Networks</td>
<td>42.43***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Source</td>
<td>5.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One Source</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple Sources</td>
<td>6.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS Knowledge</td>
<td>23.66***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Know Condoms prevent AIDS</td>
<td>6.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not know condoms prevent</td>
<td>4.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Condom Use</th>
<th>No Condom Use</th>
<th>Student t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women’s Perceived Ability to Refuse Sex</td>
<td>3.78 0.68</td>
<td>3.77 0.69</td>
<td>0.69 0.69</td>
</tr>
<tr>
<td>Age</td>
<td>28.67 8.49</td>
<td>30.85 8.83</td>
<td>5.74*</td>
</tr>
</tbody>
</table>

Discussion of Bivariate Analysis of Condom Use

Women who are married or cohabiting do not use condoms as often as do single women and those who have been married because of fidelity and trust that their partner is faithful, too. Condom use with a long-term partner is viewed as indicating a lack of trust. Also, women who are in a long-term relationship may not want to use condoms because of it being a form of birth control, and they want to have children.
Condom use is a unique variable among the three variables because this variable not only requires a behavior change—one needs access to condoms for this risk-reducing behavior to work. Women in cities have better access to condoms than those in rural settings, allowing those women to use condoms more regularly.

Condom information also is aimed at specific ages, namely those who are sexually active who do not want to have children, so it is not surprising that younger women are using condoms more than older women, since they are receiving the information and do not want to have children yet. It is also true that women are often targeted for this information in schools, and women who want to complete their education will want to avoid pregnancy and have the cognitive ability and possibly the skills to use condoms and negotiate their use with a partner.

Having more economic resources also means women will have more access to condoms. Thus, women in higher economic classes will have the means to supply themselves with condoms. This is also true of women in higher occupational classes, who will also have more resources and more contact with informational sources to influence their condom use.

The north coast and the central region of Honduras have the highest rates of HIV/AIDS; therefore, it makes sense that they would also have the highest percentage of condom use. This is especially true in light of the fact that in the past few years massive educational interventions have been put in place and they have a higher risk perception, perhaps because they personally know people with HIV/AIDS.

Mass media and social networks are interesting in that a woman who has obtained information from mass media is less likely to have used a condom at her last sexual encounter. On the other hand, with social networks and more sources of HIV/AIDS knowledge, condom use also increases. Although mass media can be a great source of HIV/AIDS prevention information,
perhaps it can also be a source for rumors and false information about condoms use, giving women mixed signals. As for social networks, those emphasizing women’s use of condoms to reduce her risk of HIV/AIDS could be bolstering confidence in their use.

Women who understand that condom use can prevent HIV/AIDS infection have about the same level of condom use as those who have no knowledge that condoms can prevent HIV/AIDS. Although they are insignificant variables, women who feel that they have more rights to deny sex to their partners, probably also have the comfort level to negotiate condom use with their partners as well and women who come from households with more occupancy, are also getting more information on condom use, enabling them the opportunity to receive information to make the choice to use condoms.

**Multivariate Regression**

**Determinants of Sexual Abstinence among Never Married Honduran Women 15–24**

The bivariate analysis showed differences between groups of Honduran women aged 15–24 with respect to sexual abstinence. However, bivariate analysis does not test whether the variables are directly related or associated with sexual controlling for the effects of other intervening variables. To do this with a dichotomous categorical outcome variable, the useful method for testing these effects is logistic regression, which allows the investigator to estimate the net effects of each variable on the odds of sexual abstinence when variations in the other variables are controlled.

In this multivariate regression, five models were used in sequential order where independent variables are added. In the first model residence and age are included to determine how they are associated with sexual abstinence. In the second model sociodemographic variables
are added, which include education, occupation, geographical location, economic class, and the number of people living in the household. In the third model, the source of HIV/AIDS information is added and in the fourth model, women’s perceived ability to negotiate sex is added. Finally, the last model includes prior knowledge of abstinence as a way to prevent HIV/AIDS infection.

Table 5.4 shows the results of the multivariate regression estimating the effects of sociodemographics, HIV/AIDS prevention knowledge, source of HIV/AIDS information, women’s perceived ability to refuse sex, and residence on sexual abstinence. In the table each of the five models includes measurements for the goodness of fit, including the model chi-square, -2 log likelihood and Nagelkerke R-square. As seen from the model, the chi-square increases as each batch of variables are entered in successive models, this coupled with the -2 (log likelihood) decreasing in value, shows an improvement in the overall fit of each consecutive model. Looking at the Nagelkerke R-square, one sees that residence explains about 12% of the variance in sexual abstinence. When sociodemographics of education, economic class, location, occupation, and number of members sharing a household are entered in model 2, the Nagelkerke R-square goes up to explain 16% of the variance in sexual abstinence. In model three, when source of HIV/AIDS prevention information is added, the Nagelkerke R-square increases to 18% of the explained variance and stays at this level through model 5. This shows that the sociodemographic and residential variables make up most of the variation in this model. Women’s perceived ability to refuse sex, HIV/AIDS prevention knowledge, and where their source of HIV/AIDS knowledge is coming from does not explain much of the variation in sexual abstinence, but they do have significant impact.
Starting with model one, urban women are about 25% less likely (OR=.76) to be abstinent than rural women, but this is not statistically significant. Model one also includes the age of women and how it affects abstinence. Older women are shown to be 15% less likely (OR=0.85) to be abstinent than younger women. However, when other variables are entered into the regression, by model five, these variables strengthen even more and residence becomes significant. In model five, urban women are about 28% (OR=0.72) less likely to be abstinent than rural women, and older women are 26% (OR=0.74) less likely to be abstinent than younger women.

Education is significant and stays significant through all models after every variable in this study has been entered. In model two, those women who have completed primary school education are 1.58 times more likely to be abstinent, (OR=1.58) and by the time this variable is in the last model, it only slightly decreases in strength to 1.47 (OR=1.47.) However, the level of significance has decreased in strength also by the time the last model has been run.

Those who have completed secondary schooling or more are three times more likely to be abstinent (OR=3.42). However, this variable decreases slightly in strength through the inclusion of additional variables in later models. By model five, the strength of the variable has decreased to (OR=3.1), but maintains its strength of significance throughout all of the models.

Looking at economic classes, in comparison to the lowest quintile, all economic classes are more likely to be abstinent, and as variables are added, the strength of odds ratios only increases through the four models with the economic class variables. However, all variables among economic classes are insignificant.

In model two, the second poorest quintile compared to the poorest is slightly more likely to be abstinent at 1.07(OR=1.07), which stays at the same basic level throughout the rest of the
models, ending at 1.08 by the fifth model (OR=1.08). The middle quintile in model two is 1.13 (OR=1.13) times more likely, which strengthens slightly to 1.15(OR=1.15) by the last model. Of the richest two quintiles, the richer quintile starts in model two as being 1.06(OR=1.06), increasing slightly to 1.07 (OR=1.07) by the last model. The richest quintile starts and stays the same from model two to model five at 1.14(OR=1.14).

With location, all of the geographic areas have higher levels of abstinence than the north coast, and with the exception of the central region, all variables are significant. In model two, the west is 1.51 (OR=1.51) times more abstinent than the north coast, while the central region is 1.12 (OR=1.12) times more abstinent and the south-east is 1.7 (OR=1.7) times more abstinent. By model five, all of these variables weaken slightly, with the west being 1.4 (OR=1.42) times more abstinent than the north coast, the central region being 1.06 (OR=1.06) times more likely abstinent, and the south-east is 1.6 (OR=1.63) more abstinent than the north coast.

Comparing occupations to women unemployed, with the exception of professional women, who are slightly less likely to be abstinent, women who work are more likely to be abstinent than women who do not. However, with the exception of unskilled labor, the other variables in the occupation category are not significant in any of the models.

In model two, professional occupations are 14% (OR=0.86) less likely to be abstinent compared to unemployed women, while both middle occupational fields and unskilled labor are more likely to be abstinent than unemployed women, being 1.24(OR=1.24) times more abstinent and 1.54 (OR=1.54) times more abstinent respectively.
Table 5.4

Logistic Regression showing the Likelihood of Sexual Abstinence Among 2006 Honduran Never Married Women, between the Ages of 15-24 (N=4453)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Unstandardized (B) Scores and Odds Ratios (OR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model I</td>
</tr>
<tr>
<td>Residence (Rural)</td>
<td>B OR</td>
</tr>
<tr>
<td>Urban</td>
<td>-0.16</td>
</tr>
<tr>
<td>Age</td>
<td>-0.28***</td>
</tr>
<tr>
<td>Highest Level of Education (None)</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td></td>
</tr>
<tr>
<td>Secondary or More</td>
<td>1.23***</td>
</tr>
<tr>
<td>Economic Class (Poorest)</td>
<td></td>
</tr>
<tr>
<td>Poorer</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td></td>
</tr>
<tr>
<td>Richer</td>
<td></td>
</tr>
<tr>
<td>Richest</td>
<td></td>
</tr>
<tr>
<td>Location (North)</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td></td>
</tr>
<tr>
<td>Occupation (None)</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>-0.15</td>
</tr>
<tr>
<td>Middle</td>
<td>0.22</td>
</tr>
<tr>
<td>Unskilled</td>
<td>0.43*</td>
</tr>
<tr>
<td>Number of Residents per</td>
<td></td>
</tr>
<tr>
<td>3 to 6</td>
<td>0.71*</td>
</tr>
<tr>
<td>7 or more</td>
<td>0.51†</td>
</tr>
<tr>
<td>Mass Media Sources (None)</td>
<td></td>
</tr>
<tr>
<td>One or more Mass Media Sources</td>
<td></td>
</tr>
<tr>
<td>Social Network Sources (None)</td>
<td></td>
</tr>
<tr>
<td>One Social Network source</td>
<td></td>
</tr>
<tr>
<td>Multiple Social Network Sources</td>
<td></td>
</tr>
<tr>
<td>Women's Ability to Refuse Sex</td>
<td></td>
</tr>
<tr>
<td>Knowledge of Abstinence prevents AIDS</td>
<td></td>
</tr>
<tr>
<td>.2 log Likelihood</td>
<td>3318.20</td>
</tr>
<tr>
<td>Model Chi-Square (X²)</td>
<td>236.63</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.12</td>
</tr>
</tbody>
</table>

*** p<.001, ** p<.005, * p<.05, † p<.1 This data utilizes DHS weights
By model five, the strength of these variables stay almost exactly the same as in model four, with professional women being 15% (OR=0.85) less likely to be abstinent, middle occupational women being 1.2 (OR=1.2) times more likely, and unskilled women to being 1.5 (OR=1.46) times more likely to be abstinent than unemployed women. However, with the exception of the category of unskilled employment, none of the other levels achieve a level of 0.05 significance in any of the models.

As the population occupancy of the household the woman is residing in goes up, so do the odds that the women will continue to practice abstinence. In model two, in comparison to women who come from a household occupancy of 1-2 members, women who are from a household of 3-6 members are 2 times more likely (OR=2.03) to be abstinent, and women from households of 7 or more are 1.7 (OR=1.66) times more likely to be abstinent. By model five, the odds ratios only weaken slightly and the category for women in households of 3-6 being significant, and the category for women of households of 7 or more bordering on significance. In model three, sources of HIV/AIDS prevention are added to the model, and the strength of the odds ratios and significance stays the same for these variables through the final model. In comparison to women who do not utilize mass media sources for HIV/AIDS prevention information, women who do use mass media are just as likely to be abstinent (OR=1.01), but this variable is not significant.

Women who utilize social networks for HIV/AIDS prevention information are 30% less likely (OR=0.7) to be abstinent and women who utilize multiple social networks are 66% less likely (OR=0.34) to be abstinent. Both of these variables in this category are at the 0.001 level of significance.
In model four, there is virtually no difference between women who feel that they have the capability to refuse sex to their partners and women who do not feel that they can refuse sex to their partner (OR=1.05). This variable is not significant.

In the last model, prior knowledge that abstinence can prevent HIV/AIDS infection was added. This variable shows that there is no real difference in abstinence between women who do not know that abstinence can reduce their chance of being infected by HIV/AIDS than those women who do not know this, having an (OR=1.06). However, this variable is not significant.

**Discussion about Abstinence among women in Honduras Aged 15–24**

Table 5.4 reveals that socioeconomics and the source from which they receive their HIV/AIDS information play a significant role in abstinence among Honduran women. Women who attain higher levels of education are significantly more likely to maintain abstinence before the age of twenty-five. Women who come from households with more residents also have almost twice the level of maintaining primary abstinence as women from smaller households. Having multiple family members around to keep track of the young female member of the household could act as a deterrent to sexual activity. Variables that decrease the likelihood of primary abstinence are environments that reflect larger population density or flow, such as urban areas or areas of higher tourism, as well as people who interact more with their social networks for information.

To obtain a higher level of education, women may want to abstain from sex for fear of pregnancy. Women with higher educational classes may also have had the opportunity to receive education on how to negotiate abstinence with their partner, have higher self-esteem and will have the cognitive ability to understand why it might behoove them to wait to have sex.
Environment also has a very strong influence on women abstaining from sex. Women who are from urban environments have a greater chance of losing their primary abstinence than those women from rural areas. This is also true for women who live in areas of high tourism and urban areas, such as the north coast (where the Garifuna dwell) and central region. These areas of high population or population transience may have lower levels of primary abstinence retention because with more partner selection this is an enabling effect. Women from rural, secluded areas also tend to be more traditional and less likely to engage in sex.

Women who utilize their social network for HIV/AIDS knowledge also tend to have less abstinence than those who do not and the more social network resources they utilize, the less abstinent they are. This could be because women are not only receiving information about HIV/AIDS prevention from their social network sources, but could be receiving other messages as well that could encourage them into having sex. The quality of the information that is coming from these social network sources on HIV/AIDS could be false or incomplete information that could encourage women into having sex. There could be a reverse effect also, of women who have already made up their mind that they want to have sex, that are talking to their friends to gather information about it before they engage in it.

**Determinants of Fidelity among sexually active Honduran Women**

The bivariate analysis find differences between groups of sexually active Honduran women in terms of fidelity to one partner in the last year. However, bivariate analysis does not test whether the variables are directly related or associated with fidelity after controlling for the effects of other intervening variables. To do this, the useful method for testing these effects is logistic regression, which allows the investigator to estimate the net effects of each variable on fidelity when variations in the other variables are controlled.
In this multivariate regression five models were used in sequential order where independent variables are added. In the first model residence and age are investigated as to how they could affect fidelity. In the second model, sociodemographic variables are added including: education, age, occupation, geographical location, economic class, and the number of people living in the household, as well as marital status. In model three, the source of HIV/AIDS prevention knowledge is added. The fourth model adds women’s perceived ability to negotiate sex. Finally, the last model looks adds the correct prior knowledge that fidelity use may prevent HIV/AIDS.

With each model added into the regression, the model chi-square value increases. The increase in the model chi-square shows an increase in the goodness of fit for this model. This goodness of fit is bolstered by the -2 log likelihood, which, decreases with each subsequent grouping of variables entered in the following five models. In model one, the Nagelkerke R square is 0.06, showing that 6% of the variance of fidelity in these models is explained by residence (see Table 5.5). The Nagelkerke R square increases in model two to 0.48, showing 48% of the variance in the model is explained by sociodemographics and residence. By model five, the Nagelkerke R Square has not changed any, showing that by model five, thus 48% of the variation of fidelity to a single partner is explained by sociodemographics, their source of HIV/AIDS information, residence, women’s perceived ability to refuse sex, and correct prior HIV/AIDS prevention knowledge.

Being in a small rural community constricts the amount of potential partners women can have and also does not allow the ambiguity that many urban centers do, thus enforcing fidelity. Therefore, it is important to see how residence affects fidelity. Model one shows that urban women are almost 40% (OR=0.61) significantly more likely to have another partner in the last
year, as compared to those Honduran women living in rural residences. However, once more variables are added, this variable weakens, until by model five, the variable becomes insignificant and the odds ratio strength drops from 0.61 in the first model, to about 10% (OR=0.87).

Older women tend to maintain fidelity more so than younger women. In model one, age is shown to be 1.06 (OR=1.06) times significantly more likely to have only their partner than those younger than them. This odds ratio stays almost exactly the same by model five, strengthening to 1.07 (OR=1.07) times significantly more likely.

Honduran women who are, or have been, under the social contract of marriage, whether legally or socially through cohabiting in “Free Unions”, are much less likely to report having multiple partners in the last year. Compared to single women who are sexually active, married Honduran women who are sexually active are 23 times (OR=23.15) more likely to be faithful. This variable stays significant and becomes slightly stronger by the time all of the variables have been entered, in the last model (OR=23.57.) Cohabiting women, like married women, are significantly more likely to be 142 times (OR=142.12) more faithful to their partner than single women, and this odds ratio strength gains a little strength by the final model (OR=144.03) and continues its significance at the 99.9% level through all models. Women who have been in a committed relationship are also more likely to be maintain fidelity than single women, being 1.41 times (OR=1.41) significantly more likely to be faithful. By the last model, women who have been married odds ratio strengthens slightly to OR=1.42 and stays highly significant.

Educated women show a higher level of fidelity to partners, with women obtaining primary school education being 1.2 (OR=1.24) times more likely to be faithful to their partner in
the last year in comparison to a woman who did not complete her primary education. This stays about at the same level by the last model (OR=1.25), and remains significant throughout all of the models it was in. Women who have completed their secondary education or higher are 1.06 (OR=1.06) times more likely to fidelity over non-educated women, although none of these variables show any significance in any of the models. The odds ratio gains a little strength (OR=1.1) by the last model, but never gains significance.

In examining the role of economics in sexually active women’s faithfulness to their partner in the last year, I found that in comparison with the lowest quintile of women in the wealth index with the all of the other quintiles, all are more likely to be unfaithful. However, only two of these variables, the poorer and richer quintile, reach significance throughout the various models, at the 0.05 level.

By the last model, when the poorest quintile is compared to women in the poorer women quintile, poorer women are almost 30% (OR=0.74) more likely to have an additional partner, and women in the middle quintile are also 20% (OR=0.82) more likely. The richer women have an even higher odds ratio of infidelity at 25% (OR=0.75), but the richest quintile is almost equal with the poorest quintile, being only 5% (OR=0.95) more likely to have an additional partner, compared to the poorest quintile.

Women in the north are all more likely to be unfaithful to their partners in comparison to the rest of the country. In models two through five, the odds ratios and significance do not change, showing that the west was 1.33 times (OR=1.33) significantly more likely to maintain fidelity to the north, while people in the central region are 1.20 times significantly more likely (OR=1.2). The south-east is slightly more likely to maintain fidelity, with an odds ratio of 1.07, but this variable is not significant.
Table 5.5

Logistic Regression Showing the Likelihood of Fidelity Use Among Sexually Active Honduran Women in 2006, between the Ages of 15-49 (N=15442)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Unstandardized (B) Scores and Odds Ratios (OR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model I</td>
</tr>
<tr>
<td>Residence (Rural)</td>
<td>B</td>
</tr>
<tr>
<td>Urban</td>
<td>-0.51***</td>
</tr>
<tr>
<td>Age</td>
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</tr>
<tr>
<td>Marital Status (Never Married)</td>
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</tr>
<tr>
<td>Married</td>
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</tr>
<tr>
<td>Cohabiting</td>
<td>4.96***</td>
</tr>
<tr>
<td>Been Married</td>
<td>0.34***</td>
</tr>
<tr>
<td>Highest Level of Education (None)</td>
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</tr>
<tr>
<td>Primary</td>
<td>0.21**</td>
</tr>
<tr>
<td>Secondary or More</td>
<td>0.06</td>
</tr>
<tr>
<td>Economic Class (Poorest)</td>
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</tr>
<tr>
<td>Poorer</td>
<td>-0.32**</td>
</tr>
<tr>
<td>Middle</td>
<td>-0.23†</td>
</tr>
<tr>
<td>Richer</td>
<td>-0.32*</td>
</tr>
<tr>
<td>Richest</td>
<td>-0.09</td>
</tr>
<tr>
<td>Location (North)</td>
<td></td>
</tr>
<tr>
<td>West</td>
<td>0.3**</td>
</tr>
<tr>
<td>Central</td>
<td>0.2*</td>
</tr>
<tr>
<td>Southeast</td>
<td>0.07</td>
</tr>
<tr>
<td>Occupation (None)</td>
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<tr>
<td>Professional</td>
<td>0.11</td>
</tr>
<tr>
<td>Middle</td>
<td>-0.23**</td>
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<tr>
<td>Unskilled</td>
<td>-0.03</td>
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<tr>
<td>Number of Residents per Household (2 or less)</td>
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</tr>
<tr>
<td>3 to 6</td>
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</tr>
<tr>
<td>7 or more</td>
<td>0.18</td>
</tr>
<tr>
<td>Mass Media Sources (None)</td>
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</tr>
<tr>
<td>One or more Mass Media Sources</td>
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<tr>
<td>Social Network Sources (None)</td>
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</tr>
<tr>
<td>One Social Network source</td>
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</tr>
<tr>
<td>Multiple Social Network Sources</td>
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</tr>
<tr>
<td>Women’s Perceived Ability to Negotiate Sex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.03</td>
</tr>
<tr>
<td>Knowledge of Fidelity prevents AIDS</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Nagelkerke R^2</td>
<td>0.06</td>
</tr>
</tbody>
</table>

***=p<.001, **=p<.005, *=p<.05, †p<.1 This data utilizes DHS weights
In looking at occupation, comparing those who are unemployed with those who are employed, with the exception of women in professional occupations, it was found that the unemployed are more likely to maintain fidelity in the last year. By the last model, unskilled workers are 3% (OR=0.97) times more likely to be unfaithful to their partner in comparison to those unemployed, while middle class workers are 20% (OR=0.79) times more likely. This phenomena flips when it reaches those who are professionally employed who are 1.12 (OR=1.12) more likely to maintain fidelity. However, of these findings, the only occupational category that is significant is the middle class occupational category.

Compared to a household of 1–2 occupants, both a household of 3–6 members and a household of 7 or more are more likely to maintain fidelity, but not to a level of significance. In model two, a household of 3–6 members, in comparison to a household of 1–2 occupants is 1.28 times (OR=1.28) more likely to maintain fidelity in the last year. In model two also, a household of 7 or more occupants, is 1.19 times (OR=1.19) more likely to maintain fidelity. For both of these variables, the odds ratio strength does not change by model five, nor does either variable gain significance throughout any of these models.

Model three includes the variable that is included to investigate how the source of the HIV/AIDS knowledge affects fidelity among Honduran women. Compared to women who do not utilize mass media for HIV/AIDS information, women who get their information from one or more mass media sources are 1.19 times significantly more likely (OR=1.19) to be faithful in the last year. However, by model five, this variable reverses direction, to show that people who use mass media are 4% less likely to maintain fidelity (OR=0.96) and this variable loses all significance.
Social networks also affect fidelity significantly in model three, and are able to maintain this significance through the final model. In model three, in comparison to women who do not utilize their social network for HIV/AIDS prevention information, women who use one social network for information are 1.83 times more likely (OR=1.83) to maintain fidelity, and women who use multiple social networks are 20% less likely (OR=0.8). By the last model, those women who receive HIV/AIDS information from one social network strengthens its odds ratio slightly and maintains its significance (OR=1.85.) However, by the last model, those women who utilize multiple social networks, the results reverse and women are 1.24 times more likely to maintain fidelity (OR=1.24) and this variable maintains significance.

Model four introduces the women’s perceived ability to negotiate sex. This a slightly increased chance of maintaining fidelity (OR=1.05) which stays the same through model five, but in neither model does this variable gain significance.

Finally, in the last model, which focuses on correct HIV/AIDS prevention knowledge, prior knowledge that having only one sexual partner can prevent HIV/AIDS infection are added to the model to see if having this correct knowledge affects women’s fidelity. Women who have this correct HIV/AIDS knowledge are actually slightly more likely to be unfaithful to their partner—in fact, 7% more likely to have had an additional partner in the last year (OR=0.93). However, this variable is not significant.

**Discussion on Fidelity among Sexually Active Women in Honduras**

Age, marital status, education, region, and HIV/AIDS information gathered through social networks all have a significant, positive effect in comparison to their reference groups. The social contract of marriage, whether it is current or lapsed through separation, divorce and death, and “free unions” are the best predictors among women to keeping their fidelity. The
potential for social shame for unfaithful women could be very prevalent in Honduras, making married women much less likely to cheat on their husbands. Women who have been married and cohabiting also have a higher likelihood of having dependents with them, so the driving force is there for them to want a steady partner to share economics and child rearing with them, making them more faithful.

Women who are older have the higher potential of being in a relationship and of having experimented with other partners and settled down with one lifetime partner. Older women also may be more likely to hold traditional values about fidelity.

As education levels increase for women, from primary to secondary and beyond, women will have more opportunity in secondary levels to find similar more egalitarian partners in school. Women with higher levels of education will have had the background and more time to select partners who will have more likelihood to be more financially stable and to have open communication, which may decrease infidelity.

Geographic location is significant in determining fidelity. Many of the indigenous groups throughout Honduras are located in specific geographic locations, and each group has different views on social interactions, such as fidelity. Also, geographic location can determine the ability of other people outside the community to intermix with the women in this geographic location. Women in the north have greater access to the sea; therefore, they have greater access to trade, tourism, and transient fishermen, thus increasing the accessibility of potential partners.

Having more social networks, for HIV/AIDS information or otherwise, also may show that women are more connected with their network and can work out any problems with their social network that drive the possibility of being unfaithful. Talking things out and having an outlet to voice their thoughts, concerns, and feelings with their social networks, as well as
receiving HIV/AIDS information, may make them less likely to seek other sources that may give them this attention they may need.

Determinants of Condom Use among Sexually Active Honduran Women

As with all of the other behavior models that have been explored, the bivariate analysis has shown differences between groups of sexually active Honduran women in terms of condom use at the time of last sexual intercourse. This could be due to the low condom use among the Honduran population. However, to gain a better understanding of how different variables impact condom use, bivariate analysis is insufficient. Bivariate analysis does not test whether the variables are directly related or associated with condom use controlling for the effects of other intervening variables. To do this, the useful method for testing these effects is logistic regression, which allows an estimate of the net effects of each variable on condom use when variations in the other variables are controlled.

In this multivariate regression five models were used in sequential order where independent variables were added. In the first model residence and age are investigated with regard to their effect on condom use. In the second model, sociodemographic variables are added, including education, age, occupation, geographical location, economic class, and the number of people living in the household, as well as marital status. In model three, the source of HIV/AIDS prevention knowledge is added. The fourth model adds women’s perceived ability to negotiate sex. Finally, the last model looks adds the correct prior knowledge that condoms use may prevent HIV/AIDS.

The subsequent increase of the model chi-square in each model shows a decent goodness-of-fit. This goodness-of-fit is bolstered by the -2 log likelihood, which decreasing with each subsequent grouping of variables entered in the following five models. In model one, the
Nagelkerke R square is 0.04, showing that 4% of the variance of fidelity in these models is explained by residence. The Nagelkerke R square increases in model two to 0.16, showing 16% of the variance in the model is explained by sociodemographics and residence. By model five, the Nagelkerke R Square has not changed any, showing that by model five, thus 16% of the variation of fidelity to a single partner is explained by sociodemographics, their source of HIV/AIDS information, residence, women’s perceived ability to negotiate sex, and correct prior knowledge that condoms can prevent HIV/AIDS (see Table 5.6).

The first model investigates the impact of residency and age on condom use. Living in a rural setting may not allow couples access to condoms or possibly rural families could be more traditional, not wanting to use condoms. Living in a developing nation, many rural people need children to help with agriculture, fishing, and other labor-intensive endeavors. Therefore, rural couples may not want to use condoms because of their birth control aspect.

Women who are older may feel more stable in their relationship and feel less need to use condoms. Younger women may also be utilizing condoms as a source of birth control, which older women may not be using, depending on their desire for children.

Women who are urban residents are 2 times (OR=2.33) significantly more likely to use condoms than rural women. However, by the last model this variable weakens drastically to 1.35 (OR=1.35) and loses its level of significance from the 99.99% level to the 95% level of significance.

With age, women are slightly less likely to have used condoms in their last sexual intercourse. In model one; older women are 4% significantly less likely (OR=0.96) to use condoms than younger women. By the last model, this variable’s odds ratio weakens slightly to 2% significantly less likely (OR=0.98).
The sociodemographic characteristics of the women in this study are entered as variables in model two. The first sociodemographic category in model two, marital status, shows that any type of socially sanctioned relationship with a man makes the woman less likely to have used a condom at last sexual intercourse. By the last model, when compared with women who have never married, married women are 72% significantly less likely (OR=0.28) to use condoms with their partner at their last sexual intercourse, and this strengthens slightly to 73% (OR=0.27) by the last model. Women who are cohabiting are 86% significantly less likely (OR=0.14) to use condoms, which stays at the same strength throughout the rest of the models, with all variables added. Women who have been married (separated, divorced, or widowed) are 47% significantly less likely (OR=0.53) to use condoms, and this variable keeps this strength throughout the other models.

Looking at educational attainment, women who have attained education, whether at the primary or secondary school level, when compared to women who have not attained any education, are more likely to use a condom at their last sexual encounter. In model two, women who have completed primary school are 1.22 times more likely to use condoms and those completing primary school are 1.38 times more likely to use condoms than those women who have not completed any education. However, neither of these variables reach any level of significance, and by model five, both of these variables loses some odds ratio strength and never obtain significance.

When comparing the lowest quintile of economic class to those classes that are wealthier, all other classes are more likely to use condoms than this poorest quintile.
Table 5.6

Logistic Regression Analysis Showing the Likelihood of Condom Use at Last Sexual Intercourse Among 2006 Honduran Women, between the Ages of 15-49 (N=12534)

<table>
<thead>
<tr>
<th>Explanatory Variables</th>
<th>Unstandardized (B) Scores and Odds Ratios (OR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model I</td>
</tr>
<tr>
<td>Residence (Rural)</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>-0.33***</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.03***</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Marital Status (Never Married)</td>
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<tr>
<td>Married</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabiting</td>
<td>1.65***</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Been Married</td>
<td>-3.03***</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest Level of Education (None)</td>
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</tr>
<tr>
<td>Primary</td>
<td>0.20*</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Secondary or More</td>
<td>0.18</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Economic Class (Poorest)</td>
<td></td>
</tr>
<tr>
<td>Poorer</td>
<td>-0.27*</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>-0.11</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Richer</td>
<td>-0.14</td>
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<tr>
<td></td>
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<tr>
<td>Richest</td>
<td>0.12</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td>Location (North)</td>
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<tr>
<td>West</td>
<td>0.35**</td>
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<td></td>
<td></td>
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<tr>
<td>Central</td>
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<td></td>
<td></td>
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<tr>
<td>Southeast</td>
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<td>Occupation (None)</td>
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<tr>
<td>Middle</td>
<td>-0.20†</td>
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<td>0.06</td>
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<td>Number of Residents per Household (2 or less)</td>
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<tr>
<td>3 to 6</td>
<td>0.13</td>
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<td></td>
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<tr>
<td>7 or more</td>
<td>-0.03</td>
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<td></td>
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</tr>
<tr>
<td>Women’s Ability to Refuse Sex Knowledge of Condom Use prevents AIDS</td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>-2 log Likelihood</td>
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<tr>
<td>Model Chi-Square ($\chi^2$)</td>
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</tr>
<tr>
<td>Nagelkerke $R^2$</td>
<td>0.02</td>
</tr>
</tbody>
</table>

***=p<.001, **=p<.005, *=p<.05, †p<.1 This data utilizes DHS weights
However, by the final model, all of the variables have decreased in odds ratio strength and none of the other four quintiles reach significance. In this last model, the poorer quintile is 1.32 times more likely to use a condom (OR=1.32), and the middle class is 1.6 times more likely (OR=1.58) to use a condom. The richer classes also have a higher likelihood to condom use, with the richer quintile being 1.5 (OR=1.5) times more likely and the richest also being 1.5 times more likely (OR=1.54) to use condoms on their last sexual encounter.

When comparing regions in Honduras to the north coast, the west has more condom use, but the central region and south-east has less condom use, but all variables are insignificant. The north coast to and the west is in essence, are equal in condom use, but the west increases strength slightly by the last model to be 1.03 times more likely (OR=1.03) to use condoms. The central region is 14% less likely (OR=0.86) to use condoms by the last model, and the southeast is 27% less likely (OR=0.73) to use condoms at their last encounter.

Women who have occupations are more likely to use condoms at their last sexual encounter when compared to women who do not have an occupation. However, only one variable, middle occupational class, is significant. By the final model, women with professional occupations are 1.52 times more likely to use condoms (OR=1.52). Middle occupational class, is 1.65 times significantly more likely (1.65) to use condoms, and unskilled workers are 1.14 (OR=1.14) times more likely to use condoms when compared to unemployed women.

Household density shows that the more people that reside within a household, the more likely the women are to use a condom. Compared to a small household of one to two members, by model five, a household of 3-6 people is 1.29 times (OR=1.29) more likely to use condoms, and households of 7 or more are 1.42 times more likely (OR=1.42) to use condoms at their last
sexual encounter. However, these variables do not obtain a confidence level of 95% to rule out sampling error.

In model three, the variables looking at the sources of HIV/AIDS information and how it influences condom use are added. Looking at mass media, the results show that compared to women who have not received HIV/AIDS information from mass media, women who do utilize this source of information are 7% less likely (OR=0.93) to use condoms. When all other models are added, the odds ratio strengthens slightly to 8% (OR=0.92), however this variable never was found to be significant.

For women who gather information about HIV/AIDS from their social networks, comparing women who do not utilize their social networks at all, women who utilize one social network are 1% less likely to use condoms (OR=0.99), while women who utilize multiple social network sources are 1.22 times more likely (OR=1.22) to use condoms. By the last model, women who use only one social network odds ratios stay the same, while the women who use multiple resources weakens slightly to 1.18 (OR=1.18). However, at no point do any of these variables in any of these models reach significance.

In model four, women’s ability to negotiate sex is added into the model to see how it affects condom use. Women who perceive more ability are 1.03 (OR=1.03) times more likely to use condoms, which weakens slightly to 1.02 (OR=1.02) by the final model. This variable does not achieve significance in either of these models, thus sampling error cannot be ruled out.

The last model adds prior knowledge that condom use can prevent HIV/AIDS to the model to see how it affects condom use among women. Women who have prior knowledge of condom use as a way of preventing HIV/AIDS are 1.33 times significantly more likely (OR=1.33) to use condoms in comparison to women who do not have this prior knowledge.
Discussion about Condom Use among Sexually Active women in Honduras

With the exception of age, residence, marital status and occupation, most variables do not significantly affect condom use among Honduran women. Women who live in urban areas may utilize condoms more frequently than rural women because of easier access to condoms than rural women. Because Honduran agriculture is, for the most part, not mechanized, rural Honduran women could also have a greater demand for children as a source of labor on their farms. Because condoms are used as a source of birth control, as well as a means to prevent sexually transmitted diseases, such as HIV/AIDS, rural women may not be using condoms so they can have more children.

Older women could use condoms less often because as they age, they have more desire to have children and they are in more stable relationships, or utilize other forms of birth control that make them feel more intimate with their partners. Older women are also further from traditional sources of information, such as schools, where many women gather information on HIV/AIDS and birth control from teachers and friends.

Although there is only one variable within the occupation variables, that of middle occupation, which is significant, when compared with women who are unemployed, these variables show that women who have occupations tend to use condoms more often than do unemployed women. This could be because women who have occupations are more likely to interact with people, and thus have access to information about condoms. Also, having an occupation could also make them have less interested in having children and thus want to utilize birth control.

Although education in general is insignificant, having specific knowledge that condom use may prevent HIV/AIDS infection does increase Honduran women’s chance of condom use. This could be a direct effect of the educational campaigns that have been performed by the
Honduran government and the Non-governmental Organizations, which tend to heavily promote condom use.
Chapter 6
Qualitative and Mixed Methods

This chapter explores qualitative data collected in this research. First I discuss the justification for use of a mixed-methodology and the theoretical background utilized in this study. I then delve into the different data collection procedures, techniques to verify data, and types of qualitative data collected (in-depth interviews and focus groups.) Finally, I review how and why these interviews were chosen, offer field notes on the background of the sites, and what was done to strengthen the quality of the data collected.

Mixed Method Design: Explanatory Model

For a better understanding of how HIV/AIDS has affected Honduras, a mixed-methodology research design was chosen. This research design utilized a two-phase explanatory mixed method design (Cresswell et al. 2003). With this design, I used the results from the Honduran Demographic and Health Survey (HDHS) to quantitatively analyze the general female population of Honduras, to form questions for a specific, high risk population within the Honduran population, which contains a concentrated epidemic of HIV/AIDS. This design is appropriate in using quantitative data to help explain significant or insignificant variables, to gain a better understanding of the descriptive predictors that drive HIV/AIDS risk behavior, (Morse 1991). and to investigate new areas of inquiry (Greene et al. 1989b). The quantitative results from the HDHS study guided the research questions for the in-depth interviews and focus groups, and in addition, the qualitative research produced new areas of knowledge and inquiry.

The Honduran Demographic and Health Survey (HDHS) has many strengths. It is relatively current, thorough in many background variables needed for understanding HIV/AIDS,
and representative for Honduran females. For these reasons, it is useful in determining predictors for HIV/AIDS behavior within the country, with regard to how socioeconomics, sources of HIV/AIDS information, and the background of Honduran women that can affect HIV/AIDS risk behavior. Furthermore, the HDHS can analyze normative behavior around HIV/AIDS, which research has shown can affect the spread of HIV/AIDS (Sumartojo 2000; Tawil et al. 1995).

Having the results of this survey allows an illumination of the overall environment and background of Honduras that shapes critical decisions about behavior choices that could increase or decrease potential risk for HIV/AIDS. Furthermore, it gives some insight into areas in need of further research with the Garifuna, which can be elaborated on in the qualitative areas of this research.

However, because of the way the survey was constructed, the HDHS cannot disaggregate the Garifuna population specifically. No specific variables can be connected to the Garifuna, directly, since no questions relate to ethnicity, language, or geographical location, to the point where it can differentiate variables to the Garifuna villages specifically. Because Honduras is engaged in a concentrated HIV/AIDS epidemic, mostly among the Garifuna, men having sex with men, and community sex workers (Barber-Madden et al. 2008), to understand the HIV/AIDS epidemic in Honduras, it is critical to have access to one of these populations.

The results of the HDHS analysis reveal interesting results, but due to the nature of the data, they cannot explain why or how these variables affect behavior in the way that they do. Some of the questions that were raised by the quantitative data results are further explored in the qualitative research:

1. What is it about education, regardless of prior knowledge that is a predictor for increased Abstinence and Being Faithful?
2. What is it about talking to someone about HIV/AIDS that affects Abstinence negatively and Being Faithful positively?
3. Why HIV/AIDS knowledge only have a positive effect on women using condoms and no other preventative behavior?
4. Why are women’s perceived ability to negotiate sex insignificant? What is the background of women’s choice in Honduras, especially with a population within the concentrated epidemic?

These questions can be better understood by understanding the flow of information and how this information is perceived. This is especially important in understanding how information is being process by a population that is a part of a concentrated epidemic, such as the Garifuna in Honduras. Because the HDHS reported that mass media information sources were all insignificant in predicting any of the ABC behavior among Honduran women, there must be some reasoning as to why information that could reduce one’s risk potential to contracting HIV/AIDS is not being utilized. Further qualitative information may be able to elaborate on these phenomena.

Besides using qualitative methodology to elaborate on the quantitative results, I use the qualitative information to better understand why the Garifuna appear as a population within the concentrated epidemic and how things have changed in their community since it happened. Specifically, I am interested in understanding how behavior has or has not changed since the Garifuna have become aware of HIV/AIDS, the ways in which it is spread, and the sources of information about this disease that this community deems trustworthy. Qualitative research is the perfect medium to better investigate these questions that were brought up by the quantitative methods of this research. Furthermore, it allows the subjects within this study to direct the line of inquiry to areas not anticipated by the researcher.
Theoretical Background on Qualitative Data Collection

**Phenomenology**

There are many different varieties of qualitative traditions in inquiry, such as grounded theory, case-study, and ethnography, to list a few (Cresswell 1998). This inquiry bases its foundation behind the idea of researching a shared idea or experience amongst many people about a concept or phenomenon (Polkinghorne 1989). This study looks at the shared phenomenon of HIV/AIDS among the Garifuna in Honduras. Specifically it investigates individual perceptions of how HIV/AIDS started within the community and how the Garifuna and development organizations who work closely within these communities interpret its cause and effect.

The roots of phenomenology start with German mathematician Edmund Husserl, who wrote extensively on the subject within the field of philosophy. However, since these first writings on the subject, it has since been interpreted into the fields of sociology by Schutz, who wanted to analyze how individuals interpreted everyday life, especially through social interactions (Swingwood 1991), and psychology, which also concentrates on the meaning of experience, but more so on the experience of individuals as the central theme, than group experiences (Moustakas 1994). A general consensus of this tradition of inquiry is that it gives the researcher a general outline or approach to conducting their research, but they are expected to “develop plans of study to especially suited to understanding the particular experimental phenomenon” (Polkinghorne, 1989:44).
Although there is no specific way to conduct a phenomenological study, certain procedural guidelines are followed by almost all studies of this method of inquiry, namely the people to be included in this study need to have experienced the phenomenon being researched, and questions are created to allow these individuals to explore the meaning of that lived experience (Cresswell 1998). Another important theme in this method of inquiry is the idea that the researcher must “suspend all judgments about what is real” (Moustakas 1994). This concept of “epoch” is that the investigator must list their preconceived notions on the subject to understand the phenomenon through the responses of the subjects within the study (Field and Morse 1985).

The information needed to conduct a phenomenological study is collected through interviews, which are transcribed and analyzed utilizing among other things the investigator’s self-reflection as well as highlighting their experiences on the subject matter. For this study, this was done through in-depth interviews with development organization workers working with the Garifuna communities and Garifuna focus groups on their experience with the HIV/AIDS epidemic inside their communities.

Data Collection Procedures and Techniques

Standards of Quality and Verification

One of the major concerns with any qualitative study is to confirm that the data accurately reflect the true meaning of the actors being studied. Therefore, it is important to have mechanisms in place to verify the study findings and conclusions. Creswell (1998) outlined a vast array of ways to engage in this verification, all of which are at the disposal of qualitative researchers, including: triangulation, peer review or debriefing, negative case analysis, clarifying
researcher bias, member checks, rich or thick description, and external audits. For the purpose of verification in this study, the researcher uses triangulation, clarification of researcher bias, and thick description.

Of all forms of verification, arguably the most important is verification through triangulation (Mathison 1988). This form of verification uses multiple sources of data and methods to cross verify the accuracy of the information. In the case of the in-depth interviews, the interviews ranged from personnel employed by large multinational organizations and national health services that fund the HIV/AIDS prevention programs, to the nongovernmental organizations hired part-time community health workers. With the focus groups, the people making up these focus groups came from multiple villages across the north coast and the bay islands, from various educational backgrounds, occupations, and age groups and of different genders, making each individual’s experience with this subject matter unique. These varied backgrounds and experiences among focus group members allow the collection of corroborating and contradictory evidence on themes that will be used in organizing and discussing the research findings (Greene et al. 1989a).

Throughout this study the researcher seeks to provide as detailed a description as possible of the data and the context in which they were collected. Thus, when raw data are presented in the findings chapters in the forms of quotes from interview transcripts attempts have been made to reveal the context of the geographical, demographic information to the individual, and the setting in which that the information was gathered. This allows the reader the opportunity to judge the transferability of these findings to other settings which might share these characteristics (Cresswell 1998). The final manner in which to ensure credibility of this research is to give the reader a perspective of the researcher, to understand how he is viewing this data in
its application to this study. This will bring possible biases the researcher may have to light, in order to give a better appreciation of the research.

**Limitations**

In this research a number of limitations exist, including but not limited to: forcing data into preconceived theoretical categories, positionality of the researcher, interviewers who do not have knowledge of key information, and discomfort with questions dealing with sexual content. Furthermore, the focus group facilitator may have inadvertent biases; there may be time and geographical biases, and background and values of the researcher may bring pre-existing biases to the research.

Many of the key informants representing the development organization in Honduras had a good working knowledge of the Garifuna social norms, history, and political background due to working in the Garifuna communities, for an extended amount of time, providing HIV/AIDS education programs. However, some of the key informants did not have access or background on this information because they were community health workers who did not delve into these intricacies; rather, they were only given a program to implement, and they were working to accomplish this goal.

While all of the key informants either worked with HIV/AIDS in Honduras or worked with the Garifuna, not all of the interviewees worked directly with the Garifuna in HIV/AIDS development programs. Some of the interviews occurred with international organizations that provided the funding and the technical support to the different nongovernmental organizations, but did not actually work directly with program implementation. Consequently, many of the interview questions had to be very general about programs and opinions.
To mitigate this weakness, I did not force the data and coded the key informant responses in categories that fit their responses. Often I had to collect the different pieces of the puzzle and fit them together. Thus there could be some misinterpretation about how the roles of the development organizations, the local nongovernmental organizations, and the local Garifuna nongovernmental organizations information came together.

Focus group members may have felt uncomfortable divulging information involving sexual matters. Although the focus group members are asked not to talk about the contents of the focus group outside the focus group, there is always a chance they will. In a small rural community, this could cause focus group members to answer questions in a manner where they do not want to lose respect in their community.

Because of my background as a white American male, I understand that my positionality affects aspects of the research process—my framing of the research questions, analytical background, and social influences help form my analytical approach (Naples 2003). The greatest concern of this positionality is its influence on data collection that requires direct interactions between individuals. Because in-depth interviews and focus groups are direct interactions, my gender, race and class will affect these interactions (Warren and Karner 2005). Past qualitative research has tried two different techniques to mitigate this problem of positionality, both techniques try to equalize the power differences between the researcher and interviewee. The first is to match interviewers and interviewees together that have as much homogeneity as possible (Williams and Heikes 1993). The second is to have interviewees feel that they are equal or in a position of more power than the interviewer (McCorkel and Myers 2003).

To mitigate this problem, a female Garifuna focus group facilitator was hired to conduct the female focus groups. The Garifuna female focus group leader was chosen for her educational
background and experiences within the Garifuna communities. Her past experience in these communities brought an element of ease to the research since she had prior contact with these communities before conducting focus groups and programs. By her having the commonality of sex, race, and background in the area, this should help mitigate some of the possible problems that could have occurred from positionality and power dynamics within the female focus group and lessen socially proscribed responses.

For the male Garifuna focus groups, there was the added validity problem of having two focus group facilitators. The female Garifuna leader, because of the general views of Garifuna males, was considered to be in a position of lower power and not a threat to them (McCorkel and Myers 2003). This theoretical idea of “studying up” or having a study group that is socially in a position of power above the interviewer has been used in qualitative research to mitigate power dynamics and as a way to diminish socially proscribed responses (Lee 1997).

As for my co-facilitating the male focus groups, because I am a white American and because many Americans have had a history of exploiting Latin America and some Americans hold racist attitudes toward people of African descent, my research may be seen by some as exploitative. However, I would argue that many of the Garifuna communities do not feel that the U.S. is an exploitative force—rather, many feel that exploitation derives from the government of Honduras. Questions from a white American give them an outlet to voice their opinions and frustrations to an outside source. Since many of the Garifuna have relatives who live in the U.S., and many have encountered US tourists, they do not have pre-conceived images of the U.S., and thus will be more at ease with talking with one.

The results of the male focus groups revealed that they felt at ease talking in front of the co-facilitators. Throughout the focus groups, they did not seem to give socially proscribed
responses; indeed, they felt comfortable talking about ostracizing women who have multiple partners, women “coming of age” under the age of eighteen, and their ability to have multiple wives as a part of their privilege within their culture that I “would not understand.”

Due to time and money issues, there were geographical constraints to this study. Going to rural villages, some of them only accessible by boat, was not an achievable goal. Due to these constraints, many of the more rural places were not included in this study. Because rural communities tend to hold more traditional values, they may have different opinions or experiences than the people that were included in this study. However, from prior studies, it seems that the HIV/AIDS impact did not affect these communities as heavily as the rural communities surrounding cities on the north coast, which were included in my study.

The timing of the data collection was delineated by the communities’ access to public transportation. Most Garifuna communities did not have access to taxis or buses at night. Therefore, the only times I could approach Garifunas for focus groups and have ample time to conduct them was in the late morning and early afternoon. Due to these time constraints, some of the groups might have been excluded from this research, especially fishermen, who leave at night and return early in the morning. However, according to the survey responses in the focus groups, the respondents had diverse backgrounds and educations.

The final limitation of concern to this study is a limitation for any researcher involved in qualitative research. The background and values of the researcher may influence the findings of the research. For the researcher, a number of biases and assumptions play a part in the research process. These assumptions and biases come from the professional and academic background of the author.
Prior to the study, I spent twenty-seven months in Honduras as a health volunteer in the Peace Corps. During that time I learned about the plight of the Garifuna and their battle with an HIV/AIDS epidemic. I learned that it was not only a problem of individual choice or behavior with the Garifuna, but deeper social problems such as poverty, lack of resources, and minority status issues, as well as policy decisions made in Tegucigalpa and Washington, D.C., that were affecting these communities and shaping the HIV/AIDS surge among the Garifuna.

I spent the last fifteen years of my life studying or implementing public health, specifically community health education, and believe that there is a sound science behind public health that can be applied to relieve a community’s health problems through the correct application of health policy and programs. These experiences have affected me in a myriad of ways. Namely, I feel that public policy and sound public health science can improve the human condition and the wider public good. It is my belief that timely and specific opportunities occur where policy can be altered or enacted for the purpose of progress and relief along multiple dimensions. Secondly, I believe that social and economic progress is possible and that our knowledge of existing problems has grown and our understanding of HIV/AIDS is multiplying exponentially for progress to transpire.

However, these mitigations are not without their problems either. One problem with matching up people with similar characteristics is that the interviewers and interviewees personalities are not static and can change as the research does (Kusow 2003). Because the characteristics of the interviewer/interviewee are social constructs, homogeneity often times cannot be pre-determined. Therefore, it is important to have an understanding of how the demographic similarities and dissimilarities (race, sex, and class) of the researcher and the interviewees will affect the response by constantly investigating the influence that the
researchers' positionality will have on the response to obtain stronger objectivity (McCorkel and Myers 2003).

Looking at in-depth interviews with development workers, there were two types of interviewees: those who were higher status funding agents who resided within the capital and those who were fieldworkers who implemented the programs within the Garifuna communities. The higher status development workers treated me as their equal and were comfortable talking to an outsider. Many of the interviews with the fieldworkers were set up in advance through the funding agents in the capital and thus the interviews felt like they were a part of their duties. There was some concern that these interviewees may try to be overly positive about their programs and interactions with the Garifuna, but all interviewees candidly talked about some of the negative aspects of the interventions without prompting.

**In-Depth Interviews**

Two different types of qualitative data were collected and utilized in this study: in-depth interviews and focus groups. The sample of people for in-depth interviews was selected from the pool of national and international development organizations that had ongoing programs in Honduras dealing with Garifuna HIV/AIDS prevention. The first few interviews were with major multi-lateral and bi-lateral funders of HIV/AIDS prevention programming and were expanded through snowball sampling procedures to smaller local NGOs working in Honduras. Interviews continued with stakeholders in HIV/AIDS prevention programming in Honduras until saturation was achieved, or the point that I heard the same names repeatedly and I had interviewed them all. I initially contacted these organizations prior to traveling to Honduras based on my prior experience of providing development services in Honduras for two years through the Peace
Corps, from 2000 to 2002. These initial contacts served as a channel to identifying future key informants for interviews (Loftland and Loftland 1995).

General Information of In-Depth Interviews

A total of 18 people were interviewed in 17 interviews (see Table 6.1), with one interview involving two people from the same organization interviewed at the same time. These interviews were conducted in the summer of 2007, and most of the interviews ran about an hour, with the longest being just short of 2 hours, and the shortest being 30 minutes. All interviews were recorded with a digital recorder, translated from Spanish to English, then transcribed using Microsoft Windows Media Player. These 17 interviews produced 7744 lines of text to be analyzed with Nu*Dust 6 qualitative analysis software.

The in-depth interviews followed a menu of questions (see Appendix C), which focused on their experiences working with the Garifuna and their organization, how the HIV/AIDS epidemic has affected the Garifuna community, the reason they believe the Garifuna community has higher rates of HIV/AIDS than the rest of Honduras, how the Garifuna feel about communicating about HIV/AIDS and what kind of programs have they have conducted with the Garifuna in the past or at present.

Focus Groups

In the last 20 years there has been an increase in research on sexual behaviors and attitudes as these related to the HIV/AIDS epidemic and teen pregnancy. However, much of this research has been in the form of quantitative methodology (Janus and Janus 1993; Johnson et al. 1994; Johnson and Wellings 1994) that have missed some of the contextual issues driving sexual attitudes and perceptions. Because of these contextual issues, there has been a push for more qualitative research into sexual attitudinal research (Frith 2000). The Sexuality Research
Assessment Project has advocated for an increase of qualitative methods for a better understanding of the cultural milieu around sexual decision making (DiMauro 1995). Focus groups are one type of qualitative methods, which typically are “a small group of people engaging in collective discussion on a topic selected by the researcher, to gain insight into the personal experiences, beliefs, attitudes and feelings that underlie behavior” (Frith 2000, p.276).

In sexual research, focus groups have been used in a wide variety of issues related to sexuality, including sexual decision making (Gilmore et al. 1996), sexual communication (Motley and Reeder 1995), sexual aggression (Norris et al. 1996), sexual risk taking (Hammer et al. 1996), evaluation of sex education (Cairns et al. 1994), and feelings about HIV testing and condom use (Frith 2000; Sobo 1994).

Focus groups can be an effective manner to produce hypotheses or research subjective matter about which little is known (Bertrand et al. 1992). Focus groups were chosen for this study for their expediency and their track record of being useful in exploratory research, their ability to learn the local language and vocabulary in talking about sexual activity and their creation of an environment that allows participants to feel more comfortable in discussing sexual subject matter. By creating a group of alike people, focus groups allow the participants to be surrounded with other people like them, thus increasing the chance that someone in the group has a similar experience, hence increasing the individual’s level of comfort in talking about sensitive subject matter (Frith 2000). Although some research shows that focus groups can cause problems with guaranteeing confidentiality (Smith 1995) and there have been some reservations about whether focus group members will feel comfortable in discussing sexual
<table>
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<th>Years of Experience</th>
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<td>(PASMO)</td>
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<td>Garifuna NGO</td>
<td>8 years</td>
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matters in groups. However, a considerable body of work shows that focus groups actually enhance the disclosure of sex-related material in three ways:

1. Shared experiences between group members may encourage discussion of difficult and sensitive issues;

2. Agreement can help build an elaborated and fuller picture of their views; and

3. Disagreement may lead participants to defend their views and provide further explanation (Frith 2000).

The focus groups in Honduras were separated by gender, and the female focus groups were conducted exclusively by a female focus group leader to encourage comfort and candid talk among the group members. The male Garifuna focus groups that I co-facilitated with the female facilitator or another Garifuna male did not exhibit overt discomfort with discussing sexual issues, even with focus groups that had a female in the room. The female focus group leader and the recordings from the female focus groups revealed that the females did not give the impression of feeling uncomfortable in their discussions.

Selection of Focus Group Sites

The selection of focus group sites was narrowed to the political districts that contain any significant Garifuna population. There were the departments of Cortez, Atlantida, Colon, Las Islas, and Gracias a Dios. After consulting with three different non-governmental and international development organizations that worked with the Garifuna, it was decided that many of the Garifuna communities in the departments of Cortez and Gracias a Dios were inaccessible. Many of the communities in these departments are only accessible by boat, and therefore due to limited time and funding, they were omitted. Of the three remaining departments, it was brought to my attention that the research was starting at the beginning of the rainy season in Honduras, and therefore there needed to be a certain amount of caution with communities on the north coast.
which were prone to having their roads washed out. The communities that were prone to flooding were also omitted from the study, for fear that the window of opportunity was not such that time could be spared, nor was it worth the safety risk.

On the north coast of Honduras the Garifuna communities center around three major cities: Tela, La Ceiba, and Trujillo. Research on the HIV/AIDS epidemic mostly centered around two cities on the north coast: Tela and La Ceiba. I chose two communities around Tela, two around La Ceiba, and one around Trujillo, with a pilot group conducted in a community on Las Islas before field work started. The pilot focus group was arranged through a health worker on the island and I was accompanied by the director of the Garifuna’s non-government organization’s community health workers on the north coast to help organize the groups. The community health worker was female and conducted the female focus group, and the director accompanied me in conducting the male group. Two weeks after that, ten focus groups, five male and five female, in five different communities in five days across the north coast were conducted.

Selection of Female Focus Group Facilitator

During the in-depth interviews with the many different organizations in Honduras, participants were asked for the names of possible female Garifuna focus group leaders. It was stipulated in these conversations that this female must have some prior experience in conducting focus groups, a background in health if possible, and some rapport with the communities that were chosen. Three different organizations suggested the same woman, who was hired after an interview. The woman who was hired is a Garifuna woman who has a nursing degree and a master’s degree in women’s reproductive health. During her past work with development organizations, one of these agencies put her through a class on focus group facilitation. She has
since conducted multiple focus groups through the years and understood the menu of questions, the importance of follow-up questions, and the need to clarify abstract terms that may be given as answers by focus group members.

Although she never needed to use it, she was fluent in the Garifuna language and had sufficient connections in the towns that were visited to seem to have the local people’s trust so that the males appeared to speak freely and candidly. From listening to the tapes, the female sounded comfortable and there were no gaps or hesitations in their dialogue; therefore, they were assumed to be at ease talking to the facilitator.

**Background and Description of Focus Group Sites**

Observations of the community and focus group facilities are taken from my journaling about them after the focus groups were conducted, to collect information while it was fresh in my memory. Male Garifuna focus group descriptions utilized a combination of direct observations of the males coming to the focus group site in the community, as well as during the focus group interview. Demographic information, such as age, was taken from feedback from their focus group surveys.

The female Garifuna focus group descriptions employed the observations of the women coming to the focus group site within the community, and any information that could be gleaned from listening to the recordings (such as agitated talking, gaps of silence, children as a distraction, and whether they were talking to each other or only to the facilitator) as well as debriefings from the focus group facilitator, to get a grasp of how at ease the focus group was in communicating. Other information, such as age, or education, were gathered from their focus group survey.
Focus Group Site on Las Islas

The site on Las Islas was very distant and took the better part of two days to reach. I met the north coast director of Garifuna community health workers in La Ceiba to take the two-hour ferry to the island. The next day it took two hours to get to the Garifuna community; we had to transfer minibuses once. Although most of the island has been transformed by the heavy flow of tourism, the Garifuna focus group community of choice is not on this beaten trail. The mini-bus went off the paved road onto a poorly kept trail that twisted down the crest of a hill to a single road running parallel to the beach with sporadic groupings of houses lining the road, mostly constructed of clapboard walls and equal distribution of thatch and galvanized steel sheet roofs. The community contact was a community health worker for an NGO who was also a teacher in the local school. The community health worker’s house was where the female focus group was to meet, which had already been arranged. The facilities for the interview were lacking, unfortunately. When testing outside, the wind was too strong for recording; therefore, the focus group was conducted inside the teacher’s living room, which was cramped and very hot. The male focus group was not formed upon arrival and it was difficult to gather enough men to have at least four members for a focus group. Because this was a pilot group and there was difficulty in finding males between the ages of 18-25, two members of the focus group were over 25.

Having trouble finding men to volunteer for the focus groups became a reoccurring theme in every site. Many Garifuna men leave their home villages by their late teens or early twenties to pursue either schooling in other towns because most Garifuna villages lack access to secondary schools, or they leave to pursue employment either in the Honduran cities or New York City. The focus group surveys revealed that a high proportion of the men in the focus group were either fishermen or students finishing primary school. It was pure luck to get some fishermen because they usually fish late at night to the early morning. Many of the men around
the village were either sleeping during the day, engaged in leisure pursuits, or they did not seem interested in participating in most community functions that do not have a purely social function. This is why the male focus group participants tend to have an overabundance of eighteen year olds and those in their thirties and older.

The male focus group was held outside. The group was candid and outspoken, laughing a lot with definite traces of machismo sprinkled throughout. This extended to the point where one focus group member disappeared for a few moments to reappear with a glass of “Giffiti” the local brew of choice. Unfortunately, some of the recording was lost because of a rooster crowing.

The female group also went well; however, many of the women seemed to have a higher education than the average population. Many of the focus group women were local teachers.

**Focus Group Site around Tela, Site #1**

Tela is a city on the north coast of Honduras that grew in population as a hub of the railroad industry in Honduras. It also served as the headquarters of the United Fruit Company until 1970 as a way for that company to ship out fruit from its farms to ships waiting in the deep water ports of Tela. It is now a modest-sized city by Honduran standards with a population of slightly more than 30,000 with a growing tourist industry.

The Garifuna communities near Tela have been particularly hard hit by HIV/AIDS, so much so that the Honduran government opened a clinic in Tela to dispense AIDS medication.

When arriving at the first site, it was a very bright sunny day and we met with a key informant within the town whom the facilitator knew. The Garifuna focus group leader had keys to the community room, which on some occasions doubled as a classroom for the local school.
The town itself was a fishing community and by estimates of many of the key informants, one of the hardest hit by the AIDS epidemic. The town had been recently studied by the Centers for Disease Control and Prevention, so we worried about respondent burn-out.

The women’s group was conducted first, with nine women participating, ranging in age from 18–34. Many of the women had young children in tow, which added a certain energy to the focus group, but a lot of background noise in the recording. They talked for over an hour, being interrupted only once by some older men who came in to borrow some chairs and tables to use in playing dominoes outside.

The men’s focus group followed—all five of the men were eighteen years of age. The male group had a hard time engaging in the conversation, but after some time and the Garifuna focus group leader asking specific questions of each member, they lightened up and began to talk.

**Focus Group Site around Tela, Site #2**

Of all of the Garifuna sites, Tela site #2 is the site that has received the most public media attention about its high levels of HIV/AIDS. Much like Tela site #1, it was easily accessible by a taxi from Tela. The site was accessed by turning off a paved road to a dirt road that has been washed out many times. After the usual bone-jarring ride, the cab pulled up to another contact of the hired focus group leader, who helps run a youth theater group and whose house has a room that is used as a community room. This was the place where the focus groups were held. The room was large with plastic molded chairs and a stand up fan, and it could hold about twenty-five people easily. The family ran a small store out of their house; however, the community room and the storefront were far enough apart that nothing could be heard either way. The day was very bright and hot, and as usual, the group that was supposed to meet us was not there; but after
about thirty minutes, eight women on foot, bicycle, and with children in tow converged on the communal room. Seven of the eight women were eighteen, with one being thirty-four.

In the male focus group, five of the six participants were eighteen, with one being twenty-four. The men were very talkative and seemed very comfortable to talk to us about the subjects in our focus group.

Focus Group Site around La Ceiba, Site #1

With La Ceiba’s population of 180,000, it is the largest city on the north coast, and the third largest city in Honduras, being only surpassed by Tegucigalpa and San Pedro Sula. Although it has been dubbed “the Eco-Tourism Capital of Honduras”, commerce and agriculture make up the majority of the economy of La Ceiba. Because of the high commerce from agriculture and tourism, La Ceiba is a huge shipping hub in Honduras, and as such, because of the constant flow of people, there is an increased attraction of prostitutes to service the merchant marines who work here. As with the Garifuna sites around Tela, the sites around La Ceiba are about twenty minutes outside the city proper and accessible by either taxi or bus.

This site has a Garifuna nongovernmental organization office working with HIV/AIDS prevention programs that are funded by USAID; this office was utilized for the focus groups. Two hours were spent waiting for the contact, a man who was out fishing at this time, to come in from fishing. Waiting on the beach, the contact’s boat came in and the town came together to help pull the boat up on the beach. After talking for awhile and the Garifuna focus group leader accepting some fish, the party made its way back to the office, where it was deluged by people. Twenty-people showed up, eight men and twelve women, ranging in age from eighteen to twenty seven. Usually focus groups were held one at a time, which was encouraged to allow a backup
recording of the focus group. However, due to the late timing of the focus group and to all of the people showing up at the same time, the focus groups were conducted at the same time.

The women’s focus group was held inside the office while the men’s focus group was held outside on the porch. The men were mostly fishermen and were exceptionally boisterous. Especially when the question “What is the right age to begin sexual activity?” was asked, some of the younger members who answered were heckled. The men wrapped up early and they chatted among themselves until the women finished and the food arrived and the office took on a festive atmosphere.

Focus Group Site around La Ceiba, Site #2

This site is about a half-hour drive outside of La Ceiba. It is past the first site and down a dirt road. A portion of the town, the ocean front, is only accessible by foot since the bridge leading to it is rotting and can no longer take cars. This town, like the two other sites, has a fishing industry, but it is also trying to build a tourism infrastructure within the town, rather than having the tourist groups brought to them in tours. They have built a restaurant on the highway leading into the town, and they have a handmade drum shop that is well known in the Garifuna communities.

Waiting for the contact, we spent time in a house owned by a Garifuna woman who usually lives in New York City, but was visiting for a month. This migration stream to the U.S. is a phenomenon that can be seen easily in Garifuna villages by the sporadic cinderblock houses built next to clapboard and thatched houses. This house was made of painted cinderblock and was well kept and brimming with electronics, usually a sure sign that someone is living in the U.S. and sending remittances to have their house built for their retirement.
After waiting for close to two hours for our contact, he finally arrived and was able to piecemeal a group of five women together between the ages of eighteen and twenty-one. The focus group was held in a restaurant/bar that was not being utilized by anyone at the time. About five men showed up and while waiting outside, a torrential downpour occurred, causing all of the males to wait under the eave of the restaurant with other town members. As the weather worsened, the crowd was pressured inside the restaurant and the female focus group ended early. The eight men who had gathered were very comfortable speaking on the subject and were frank about topics such as dating and how gender roles are delineated in their town.

Focus Group Site around Trujillo

Like the other two cities of Tela and La Ceiba, Trujillo is a port city that receives much less ocean traffic than Tela and La Ceiba. With a population of 30,000, it has a sleepier feeling to it than the capital of Colon. However, it still is an export center, exporting bananas, coconuts, hides, and mahoganies from nearby La Mosquitia, the largest rain forest in the Western Hemisphere, next to the Amazon. Because of the bio-reserve protecting this forest, it is becoming an area of increasing tourism, and much like the other two cities, an area of higher population flow, which also brings with it the dangers of higher rates of HIV/AIDS.

Arriving at this site was the hardest among all the sites, taking about forty-five minutes over washed-out dirt roads, skidding on loose stones all the way. At some points, upon approaching low-lying areas at the bottom of hills, the swamplands that litter the area spilled over unto the road, which more than likely are washed out during the rainy season.

Our key informant’s outdoor gazebo was utilized for the focus groups. It was far enough removed from everything to offer privacy. However, there were some concerns about the male focus group’s terse answers, which could have been the result of holding the group later in the
day so that the sun’s angle pierced into the gazebo, making it uncomfortable for all. Eight women between the ages of eighteen and twenty-four were assembled within a half an hour for the female focus group, which lasted for well over an hour.

Two Garifuna men who had shown up a little early complained about the lack of Garifuna men participating in community projects. Finally, at the last minute, three more men joined the group, making the group total five men between the ages of eighteen and twenty-five.

**General Information of Focus Groups**

A total of 82 people were interviewed in 12 focus groups (see Table 6.2), with all groups divided into groups by gender. Members were recruited into the focus groups through word of mouth through the nongovernmental organizations and flyers displayed in the towns. Before each focus group was conducted, their rights and a small excerpt of what the study was about was read to them and a permission form was signed and collected from all participants and they were given a copy to keep with contact information provided on the sheet. The smallest focus group had four members, the largest had twelve, and a total of 46 females and 36 males participated. The age range of the participants was from 18–54, with 92% being within the 18–25 age range and 8% above age 25. Most of the focus group participants in the age range above 25 were in their low 30s, with only one person being 54. The mean for the focus group participants was 21.43 and the median was 20.

The interviews were conducted in the summer of 2007, and most of the interviews ran around an hour, with the longest being around 1.5 hours, and the shortest being 52 minutes. All interviews were recorded with a digital recorder, translated from Spanish to English, and then transcribed using Microsoft Windows Media Player. These 12 focus group interviews produced 7,535 lines of text that were analyzed with Nu*Dist 6 qualitative analysis software.
Table 6.2  
Numbers of Garifuna Focus Group by Gender, Site and Age Range

<table>
<thead>
<tr>
<th>Location</th>
<th># of Males in Focus Group</th>
<th>Age Range for Males</th>
<th># of Females in Focus Group</th>
<th>Age Range for Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Las Islas</td>
<td>4</td>
<td>19-34</td>
<td>4</td>
<td>20-24</td>
</tr>
<tr>
<td>Tela Site #1</td>
<td>5</td>
<td>all 18</td>
<td>9</td>
<td>18-34</td>
</tr>
<tr>
<td>Tela Site #2</td>
<td>6</td>
<td>18-25</td>
<td>8</td>
<td>18-34</td>
</tr>
<tr>
<td>La Ceiba Site #1</td>
<td>8</td>
<td>18-27</td>
<td>12</td>
<td>18-31</td>
</tr>
<tr>
<td>La Ceiba Site #2</td>
<td>8</td>
<td>18-32</td>
<td>5</td>
<td>18-21</td>
</tr>
<tr>
<td>Trujillo Site</td>
<td>5</td>
<td>18-25</td>
<td>8</td>
<td>18-24</td>
</tr>
</tbody>
</table>

Total

|                | 36                         | 46                     |

The focus groups followed a menu of questions (See Appendix D), which focused on why they think HIV/AIDS is higher in their community than the rest of Honduras. Also there were questions on social norms regarding sex, how their community has changed in the last five years due to HIV/AIDS, where they receive HIV/AIDS information, and which information did they feel was the best source and why?

**Collection of Focus Group Surveys**

After each focus group interview, a small two-page survey was given to the focus group members to complete. This survey asked for basic demographic information and an assessment of their personal risk for HIV/AIDS, and contained questions on where and how often they utilize different HIV/AIDS sources for information and which they believe are good sources. More information on this survey is provided in chapter 7 and the survey can be viewed in Appendix E.
Evidence and Proof

Coding and Data Analysis

Nu*Dist 6 qualitative data analysis software was utilized for the purpose of coding and analyzing both the in-depth interviews and the focus group data. The first step in organizing the data once it was loaded into Nu*Dist was to create a separate file for each interview. Each file for every focus group and in-depth interview was then printed and read closely to obtain a better grasp of the data. After this initial close reading of the files, a memo was prepared for each text which summarized the themes identified in the interview.

The next step in the analysis was to use broad categories to code sections of the interviews, organizing the data into blocks of texts representing different theme components. The text units coded for in-depth interviews were full sentences, and for the focus groups it was coded until the group had stopped talking on the theme they were discussing and had moved on to another topic so not to lose context. These blocks of data were then analyzed using open coding, where the investigator seeks to discover themes within the data. These data are then organized under a set of broad categories, such as sexual social norms, condom use, and reasons for the HIV/AIDS epidemic.

Following these procedures, reports were then produced for these individual codes. These reports present the text lines that were coded along with the count of how many individual documents contained a particular code. Together, the reports with the initial memos represent an attempt to explore themes and patterns emerging from the data, to construct a narrative that describes how particular organizations, through in-depth interviews, provide one perception of an issue, while the focus group transcripts offer a counterview or a collaboration of that viewpoint.
Chapter 7

Results of Focus Group Survey

Results of Focus Group Survey

A small survey was given at the end of each focus group with the Garifuna. These surveys had three purposes:

1. To understand the demographic characteristics of the focus group sample and how it compares to the DHS sample.
2. To gather the Garifuna’s perceptions regarding what they think is a good source of HIV/AIDS information.
3. To better comprehend the sample’s perception of their HIV/AIDS risk.

Eighty-two surveys were collected from twelve focus groups in six communities on the north coast of Honduras and the Bay Islands. Due to the small number of people who took this survey and the limited number of questions asked, this survey was designed to gather basic descriptive information.

Demographic Background

Table 7.1 provides a description of the HDHS and focus group samples. There are some differences in the target populations of the two surveys utilized in this research. The Honduran Demographic and Health Survey (HDHS) targeted only women; therefore, that survey only captures female perceptions, while the sample for the focus groups includes both genders. Another difference between the focus group survey and the HDHS is that the HDHS did not include measures of ethnicity whereas the focus group survey is purposively sampling a specific ethnicity, the Garifuna. Table 7.1 is organized into three columns to represent the HDHS, as well as the male and female Garifuna focus group surveys.
## Table 7.1

Comparison Table of Honduran Demographic and Health Survey to the Male and Female Garifuna Focus Group Surveys on Sociodemographics and Sources of HIV/AIDS

<table>
<thead>
<tr>
<th>Variables</th>
<th>HDHS Females (N=19,948)</th>
<th>Focus Group Males (N=36)</th>
<th>Focus Group Females (N=46)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 17</td>
<td>14.40</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>18-20</td>
<td>12.50</td>
<td>63.90</td>
<td>60.90</td>
</tr>
<tr>
<td>21-25</td>
<td>17.80</td>
<td>19.40</td>
<td>26.10</td>
</tr>
<tr>
<td>26-30</td>
<td>16.00</td>
<td>5.60</td>
<td>6.50</td>
</tr>
<tr>
<td>31-35</td>
<td>13.00</td>
<td>8.30</td>
<td>6.50</td>
</tr>
<tr>
<td>36 and above</td>
<td>26.40</td>
<td>2.80</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>24.30</td>
<td>5.60</td>
<td>4.30</td>
</tr>
<tr>
<td>Single</td>
<td>27.90</td>
<td>47.20</td>
<td>71.70</td>
</tr>
<tr>
<td>Been Married</td>
<td>13.90</td>
<td>13.90</td>
<td>4.30</td>
</tr>
<tr>
<td>Cohabiting</td>
<td>34.00</td>
<td>33.30</td>
<td>19.60</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than Primary</td>
<td>6.20</td>
<td>11.10</td>
<td>17.40</td>
</tr>
<tr>
<td>Primary Education</td>
<td>58.40</td>
<td>36.10</td>
<td>10.90</td>
</tr>
<tr>
<td>Secondary or Higher</td>
<td>35.30</td>
<td>52.80</td>
<td>71.70</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>6.30</td>
<td>8.30</td>
<td>8.70</td>
</tr>
<tr>
<td>Middle Class</td>
<td>28.60</td>
<td>11.10</td>
<td>8.70</td>
</tr>
<tr>
<td>Unskilled</td>
<td>15.70</td>
<td>33.30</td>
<td>0.00</td>
</tr>
<tr>
<td>Unemployed</td>
<td>49.40</td>
<td>47.30</td>
<td>82.60</td>
</tr>
</tbody>
</table>
The comparisons between the HDHS and my focus group surveys are not expected to be similar because my sample is composed of representatives of the Garifuna community and not all of Hondurans. I initially intended the focus groups to include a purposive sample aged 18–25, to include the most sexually active age groups that are most likely to display risky sexual behavior making them susceptible to HIV/AIDS infection. However, due to sampling difficulties, the age range was increased to accommodate some older members into the groups. Nonetheless, as can be seen in Table 7.1, a large percentage of Garifuna was aged 25 and under (83% of the males and 87% of the females) in the focus group sample.

Of those between the ages of 18 and 25, the majority were 18–20. The Garifuna focus groups tended towards the 18–20 age range because many Garifuna in the 21–25 age range leave their communities to pursue educational and economic opportunities that they often do not have in their own communities.

Since this was a purposive sample of younger Garifuna, there was a higher percentage of single individuals than in the HDHS. The differences between the male and female focus groups concerned those married or having been married, is probably due to the male Garifuna focus group population having a few older members than were found in the female Garifuna focus group.

Educational comparisons between the HDHS and the Garifuna focus groups reveal that the HDHS is more evenly distributed across educational categories. Most of the sample has completed primary schooling (58.4%), followed by secondary school (35.3%) and less than primary schooling (6.2%). The male focus groups sample is more highly educated—most have secondary or higher education (52.8%). Finally, the female focus group sample has the highest percent with less than primary school education (17.4%) and secondary or higher education.
(71.7%). The Garifuna focus groups, when compared to HDHS participants, have a higher percentage who did not complete primary school, but also a higher percentage who completed secondary school or higher.

Because the categories of the HDHS were vague in capturing much variety among occupations, the focus group survey included more detailed questions. However, to compare the two, the categories in the focus group survey were combined to match the HDHS category options. The unemployed category in the focus group sample is combined with remittances, something that the HDHS does not explore. Remittances are important to consider because the Honduran Garifuna community has a history of remittances from Garifuna males in the U.S. (Beaucage 1970; England 2006; Gonzalez 1988).

Fewer Garifuna men receive remittances from the U.S., but they are also younger, so they also have a high rate of unemployment. Because there were a considerable number of fishermen in these focus groups, they were placed into the unskilled category, which is consistent with the description of this occupation for the HDHS.

**Perceptions on Sources of HIV/AIDS Information**

One of the main goals of this survey is to understand the different sources of information Garifuna consider to be quality sources of HIV/AIDS information, and which they trust as providing them with correct information. First, the survey asked what they perceived to be a regular source of HIV/AIDS information. Second, respondents were asked to offer an assessment of the trustworthiness of the information from different sources discussed in focus group interviews.

Table 7.2 describes the frequency with which respondents used various sources of HIV/AIDS information. Few significant differences are observed when comparing the male to
the female focus group participants. Mass media is not considered a reliable source of good information. For the most part, neither are interpersonal social networks.

**Table 7.2**

Perceptions of Regular Use for HIV/AIDS Information by Gender (N=82)

<table>
<thead>
<tr>
<th></th>
<th>Sometimes or Always Used</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male %</td>
<td>Female %</td>
<td>$X^2$</td>
</tr>
<tr>
<td>Mass Media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td>33.3</td>
<td>52.2</td>
<td>2.911†</td>
</tr>
<tr>
<td>Radio</td>
<td>36.1</td>
<td>43.5</td>
<td>0.456</td>
</tr>
<tr>
<td>Newspapers/Magazines</td>
<td>55.6</td>
<td>60.9</td>
<td>0.235</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>44.4</td>
<td>45.7</td>
<td>0.012</td>
</tr>
<tr>
<td>Interpersonal Social Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Worker</td>
<td>58.3</td>
<td>43.5</td>
<td>1.783</td>
</tr>
<tr>
<td>Friends/Family</td>
<td>58.3</td>
<td>47.8</td>
<td>0.894</td>
</tr>
<tr>
<td>NGO</td>
<td>41.7</td>
<td>54.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Community Health Worker, Nurse, Doctor</td>
<td>50</td>
<td>43.5</td>
<td>0.345</td>
</tr>
<tr>
<td>School</td>
<td>61.1</td>
<td>34.8</td>
<td>5.63*</td>
</tr>
</tbody>
</table>

**=p<.001, **p<.005, *p<.05, †p<.1

Looking at mass media, only television borders on significance at (p=0.069), with females being more likely to use television as a source of HIV/AIDS information than males—52.2% to 33.3%, respectively. Among the Garifuna who utilize radio for HIV/AIDS information, 43.5% of females use radio, and 36.1% of males. A high percentage of Garifuna use newspapers and magazines as a source of HIV/AIDS information, with 60.9% of females and 55.6% of males
reporting use of these sources. The last category in mass media, pamphlets, shows that 44.4% of males use pamphlets and 45.7% of females use them.

Interpersonal social network resources show that only one category is significant to the p=0.05 level—the school. Findings reveal that 61.1% of males use this source, and only 34.8% of females use it. Co-workers are used 58.3% by males and 43.5% by females; while friends and family are also used by males at the same percentage of 58.3% and utilized a little more by females than co-workers, at 47.8%. Non-government agencies (NGOs) have a higher percentage of females using them as a HIV/AIDS source of information than males at 54.3% to 41.7% respectively, while a higher percentage of males use community health workers, nurses, or doctors more at 50% than females at 43.5%.

Since many of the males in the focus group sample tend to be younger, they probably have spent a considerable amount of time in school and their trust of school as a place in which to gain knowledge is probably high. Because local teachers are usually community members who spend many hours with their students, they have built a rapport and trust with them, which was found in the focus groups to be critical in perceiving sources of HIV/AIDS information as trustworthy. This coupled with the fact that many of the focus group members and in-depth interviewees mentioned the discomfort of parents talking to their children about sex, may make school the only source of HIV/AIDS information for some.

Women in the focus groups talk about their discomfort levels with talking to people other than close confidants about sexual subjects. Therefore, it makes sense that many women feel more comfortable getting information about HIV/AIDS from television so they may maintain their ambiguity. However, this variable is tenuous, only bordering on significance.
Perceptions of Risk

Many of the theoretical models in HIV/AIDS education hinge on the belief that increasing prevention knowledge and personal risk perception is necessary to enact behavior change to reduce risk (Glanz et al. 2002). A critical assumption in individual-level prevention theory is that individuals are risk-averse. If they perceive themselves to be at personal risk for HIV/AIDS, they will draw upon their knowledge to prevent HIV/AIDS and reduce their risk. These individuals will rationally weigh the pros and cons of the behavior change and self-evaluate to realize that the behavior change is important to reducing their risk and then act on this perceived risk to change their risky sexual behavior and reduce their risk (Prochaska et al. 2002). Therefore, it is important to understand better their risk perceptions to see how the educational campaigns have been affecting them. It is especially critical to look at young males, who are bigger risk takers during their adolescence. Therefore, the males and females are contrasted in Table 7.3.

Females are more likely to feel that they are at risk for HIV/AIDS, at 63%, than males, at 19%, although the value is not significant (P=0.116). However, because the sample was so small and the significance approaches a significant p value, even with this small sample size, there is a distinct chance that this may be significant with a larger sample size.

<table>
<thead>
<tr>
<th>Table 7.3</th>
<th>Perceived Risk to HIV/AIDS by Gender (N=80)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV/AIDS Risk</td>
<td>Male</td>
</tr>
<tr>
<td>Yes</td>
<td>19.44</td>
</tr>
</tbody>
</table>

The international development organizations in Honduras have utilized a plethora of sources to relay information to enact behavior change by increasing personal risk for the
Garifuna, as seen in the (table 7.4). The responses of the Garifuna from these focus groups show that sources of information have mixed results to personal risk to HIV/AIDS. With the exception of friends and family, all of these variables were found insignificant, although the use of Radio and NGOs border on significance. The results as a whole show that half of the catagories in mass media show of those who regularly utilized mass media sources for HIV/AIDS knowledge have more perceived risk than those who do not or rarely utilize mass media. Those who regularly use interpersonal social networks as a source for HIV/AIDS knowledge, all have more personal risk than those who do not.

Investigating mass media sources and how they affected personal risk perception to HIV/AIDS shows that those who utilized television as a source of HIV/AIDS information were more likely to feel at risk, at 51.1%, than those who felt that they were not at risk, at 37.1%. Radio listeners have a higher percentage of feeling at risk for HIV/AIDS at 48.9% than those who do not feel at risk at 31.4%. People who gather HIV/AIDS information from newspapers and magazines are more likely to feel at risk, at 60%, than those who do not feel at risk, at 57.1%. Those who utilize pamphlets as a source of HIV/AIDS information have a higher percentage of risk perception at 46.7%, than those who do not feel at risk, at 42.9%.

The interpersonal social networks, for the most part, were also not significant in affecting perceptions of individual risk. The only two sources of HIV/AIDS information that came close to significance was Non-Government Organization (NGO) (p=0.054) and Friends/Family, significant at (p=0.014).

Those Garifuna who received information from co-workers were more likely to feel at personal risk for HIV/AIDS at 53.3% compared to those who did not feel at risk at 48.6%. Family/friends had the highest percentage of personal perception of risk for HIV/AIDS at 64.4%,
compared to those who did not feel at risk at 37.1%; NGOs were used as an information source and led to a greater feeling of personal risk by 57.8% compared to 37.1% who said they were not at risk. Community health workers, nurses, and doctors were cited as a source of information by 51.5% who felt they were at personal risk for HIV/AIDS, while 40% said they were not. Those who say they received HIV/AIDS information from school had 53.3% say they were at risk for HIV/AIDS, and 40% said they were not at risk.

**Table 7.4**

Source of HIV/AIDS Information and Effects on HIV/AIDS Risk Perception (N=80)

<table>
<thead>
<tr>
<th>Source of Information</th>
<th>Believe that they are At Risk</th>
<th>Believe that they are Not at Risk</th>
<th>X²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never or Seldom Used as</td>
<td>Sometimes or Always Used as</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Information Source %</td>
<td>Information Source %</td>
<td></td>
</tr>
<tr>
<td>Mass Media</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Television</td>
<td>48.90</td>
<td>51.10</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>62.90</td>
<td>37.10</td>
<td>2</td>
</tr>
<tr>
<td>Radio</td>
<td>51.10</td>
<td>48.90</td>
<td>2.47</td>
</tr>
<tr>
<td></td>
<td>68.60</td>
<td>31.40</td>
<td>7†</td>
</tr>
<tr>
<td>Newspapers/ Magazines</td>
<td>40.00</td>
<td>60.00</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>42.90</td>
<td>57.10</td>
<td>6</td>
</tr>
<tr>
<td>Pamphlets</td>
<td>53.30</td>
<td>46.70</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>57.10</td>
<td>42.90</td>
<td>5</td>
</tr>
<tr>
<td>Interpersonal Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-Worker</td>
<td>46.70</td>
<td>53.30</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>51.40</td>
<td>48.60</td>
<td>9</td>
</tr>
<tr>
<td>Friends/ Family</td>
<td>35.60</td>
<td>64.40</td>
<td>5.88</td>
</tr>
<tr>
<td></td>
<td>62.90</td>
<td>37.10</td>
<td>5*</td>
</tr>
<tr>
<td>NGO Community Health Worker</td>
<td>42.20</td>
<td>57.80</td>
<td>3.35</td>
</tr>
<tr>
<td>Nurse, Doctor</td>
<td>48.90</td>
<td>51.10</td>
<td>5†</td>
</tr>
<tr>
<td></td>
<td>62.90</td>
<td>37.10</td>
<td>8</td>
</tr>
<tr>
<td>School</td>
<td>46.70</td>
<td>53.30</td>
<td>1.40</td>
</tr>
<tr>
<td></td>
<td>60.00</td>
<td>40.00</td>
<td>4</td>
</tr>
</tbody>
</table>

***=p<.001, **p<.005; *p<.05, †p<.1
Those who felt they were at risk of HIV infection were more likely sometimes or always to use a family/friend or an NGO as a source of HIV/AIDS information that they regularly utilize. This may be because family and friends who have prior HIV/AIDS knowledge may protect members in their own social networks, warning the individual about their behavior that would make them at risk. A history of trust between the individual and a family member or friend may make the individual more likely to consider seriously this information and feel at risk because of the trust involved between the source and the individual.

Many of the NGO workers who perform health talks and inform the Garifuna communities are often community members or are of Garifuna ethnicity. Therefore, perhaps they could be listed at a regular source of information because a certain amount of trust is evident in this finding between the Garifuna focus group members and the NGO health workers.

**What does Risk Mean?**

To understand risk, one needs to understand what the individual means when they say they are or are not at risk. The question that was included on the survey that captured risk was, "Do you believe that you are at risk for HIV/AIDS?" This question had a follow-up question asking them to qualify the answer with, "Why or why not?" When looking at the responses of those that followed up with an answer as to why they do or do not feel at risk for HIV/AIDS, two interesting themes developed in the open-ended responses. Almost all of the open-ended responses fell into two groups, those who say they feel that they are or are not at risk because they follow the ABCs (they are abstinent, monogamous, or use condoms) or they feel they are at risk because they do not follow the ABCs (they are sexually active, have multiple partners, or do not use condoms). The other group consisted of those who feel they are or are not at risk because of fatalistic answers, such as “You never know. We are all at risk, etc.” When running bivariate
analysis on personal risk perception, contrasted with fatalistic and listed ABC behavior, something interesting happens (Table 7.5).

The analysis of perceived risk and the reasoning for this feeling of being at risk tells us that those who have had prior HIV/AIDS prevention knowledge utilize this knowledge to understand why they are or are not at risk.

**Table 7.5**

<table>
<thead>
<tr>
<th>At Risk</th>
<th>ABC Reason</th>
<th>Fatalistic Reason</th>
<th>(X^2) Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
<td>60</td>
<td>22.56***</td>
</tr>
<tr>
<td>No</td>
<td>96.4</td>
<td>3.6</td>
<td></td>
</tr>
</tbody>
</table>

***=p<.001, **=p<.005, *=p<.05, †=p<.1

If they have adhered to the behaviors of abstinence, fidelity, and consistent and correct condom use, they understand that this will reduce or prevent them from contracting HIV/AIDS; therefore, they do not feel any risk. This is because they understand that it is the sexual behavior that causes the infection, not a random act. The majority of people in this sample who do feel that they are at risk do so because of a fatalistic view in HIV/AIDS infection. This in itself is not a harmful thing, but it does not purvey the idea that they understand that it is behavior that drives the HIV/AIDS infection. Random accidents, such as blood to blood infection or an error in a hospital, for the most part are negligible in spreading the infection.
Prevalence of HIV/AIDS among the Garifuna

The epidemic of HIV/AIDS has been known to exist within the Garifuna community since its epidemiological discovery in the 1990s. Theories abound as to why this is so; however, there has been no research on the Garifunas’ perceptions of this phenomenon. Indeed, there has been no research to ascertain the perceptions, thoughts, and feelings of the Garifuna on what they believe is the cause of the high HIV/AIDS rates in their community, or even if they grasp the extent of the disease in the community. Since the discovery of the high prevalence of HIV/AIDS among the Garifuna, an outpouring of foreign and domestic aid has been put into different forms of educational intervention programs to prevent new infections. Still, no evaluation has investigated what sources the Garifuna trust and access for information on a regular basis. However, it is still unknown how their behavior may have changed since the Garifuna became aware of HIV/AIDS and how it is spread. The next three chapters will explore these questions:

1. What is the perceived cause of the HIV/AIDS epidemic in the Garifuna communities?
2. Where do the Garifuna get their information on HIV/AIDS, and which source do they trust most?
3. How has Garifunas behavior changed as a result of increased awareness and education that has been received on HIV/AIDS?

Why the Garifuna have High Rates of HIV/AIDS

This chapter explores the perceptions of Honduran development agencies and the Garifunas on why the Garifuna communities suffer a higher prevalence rate of HIV/AIDS in comparison to the rest of the people in Honduras. This research serves to illuminate the controversy between the development agency and the Garifuna on why HIV/AIDS spread so
quickly among the Garifuna. Gaining these perceptions is a critical step in understanding how the Garifuna perceive their environment, and in better understanding their social norms, especially concerning sex.

**Expert Testimony of an Official at the Honduran Ministry of Health**

Of all of the in-depth interviews and focus groups conducted, one with a high-ranking official from the Honduran Ministry of Health, Enrique³, stood out. Enrique has spent more than a decade working with the Garifuna HIV/AIDS epidemic and much time contemplating the reason behind the high HIV/AIDS prevalence. His expert testimony is being highlighted specifically to help explain how HIV was introduced into the Garifuna communities and how it spread so quickly. These explanations have been fleshed out over time and in Enrique’s words, “Are very complex” and “no single explanation should stand alone.”

Enrique surmises that the high HIV/AIDS rates within the Garifuna communities stem from a mixture of poverty and geopolitical turmoil. In the interview Enrique stated four reasons for the high levels of HIV/AIDS infection among the Garifuna in Honduras. He believes the infection spread due to poverty which caused the Garifuna to: 1) immigrate to the United States, 2) become Merchant Marines, and 3) become prostitutes for economic resources. The last reason is due to the 4) geopolitical fallout of the Cold War in the region, which caused a great movement of refugees and soldiers into the region during the 1980s.

**Strategies to Combat Poverty in the Garifuna Communities**

Honduras was and continues to be one of the poorest countries in the Western Hemisphere. During the 1980s and 1990s it was listed as such on the United Nations ranking of countries (United Nations 2008). In the opinion of Enrique, this poverty hits the Garifuna

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³ Pseudonym
communities very hard, forcing the Garifuna into “... subsistence living, to whatever is available. So they can hunt or fish, which is a very survival thing.”

Beyond living off the land, the Garifuna made tough decisions to provide resources needed to survive. Depending on their gender, males turned to working away from the community, while women, who are tied more to the community, sometimes turned to prostitution to make ends meet.

“And I think the hidden job there is prostitution, on the North Coast, again, because of poverty and disparity. So there is this mass prostitution, teenagers, youth, and their mothers to the Latinos that come with money. That is the main thing... is prostitution.”

According to Enrique, males, in seeking economic opportunities away from the village, became more likely to come into contact with HIV/AIDS infection. He explained the longstanding tradition of the Garifuna immigrating to the United States, which has occurred since the 1920s, to seek resources to send home to their families. This enclave of Garifuna immigrants have usually been in New York City, but in the last few decades another enclave has been established in Los Angeles. Enrique pointed out that these two Garifuna enclaves are also some of the first places in the United States to experienced high HIV/AIDS prevalence at the same time the Garifuna were moving there.

There is a strong association with high risk communities in the Northeast of the United States (and HIV/AIDS among the Garifuna.) The first cases in California and in New York (City) ... (are also) where the Garifuna communities were living; this played a role.

Unbeknownst to the Garifuna immigrants in these enclaves in New York and Los Angeles, they had contracted HIV/AIDS from prostitutes or casual sex partners and brought it back with them to Honduras. HIV/AIDS was then spread to their long-term partners at home and to other short-term partners in the community through transactional sex.
Due to the Garifunas’ long history of fishing in the Caribbean, they took to the Merchant Marines easily since it was a vocation that took advantage of this experience. Enrique explained that merchant marines are prone to frequent prostitutes, but for him the more interesting fact, is that the Garifuna Merchant Marine population mostly worked in trade between Africa and the Americas. Enrique believes that these merchant mariners, contracted HIV/AIDS while in Africa, and helped introduce the HIV virus to the Garifuna communities.

**Political Turmoil in Central America**

Enrique’s last theory brings the HIV/AIDS infection directly to the villages themselves. In the late 1970s and 1980s, Central America was in great turmoil. At this time Honduras was at the center of the Cold War in the Americas and was under the influence of the U.S. Army. The U.S. used Honduras as a training ground and supply base for soldiers in the revolutions taking place in the neighboring countries of El Salvador, Guatemala, and Nicaragua. This turmoil caused much transience of populations into Honduras. Enrique noted that this transience of U.S. and Central American soldiers into Honduras took place about the same time that HIV/AIDS began to be found in the Garifuna villages. The north coast was a favorite place for vacationing soldiers to go in Honduras. While there, the soldiers would pass through the Garifuna villages and would have sex with the prostitutes in these villages.

In fact, the first cases (of AIDS in Honduras) were at Palmerola, the American air-base. There were two American and Honduran guys. But that was a classified secret. So what I am trying to say is that I also think that…that heavy occupation of North American troops played a major role in the epidemic…. 

Enrique’s educational background and work with the Ministry of Health and multiple development organizations through the years gives him experience and access to information that make his explanations credible and this testimony trustworthy. However, it does not necessarily
explain why the HIV/AIDS proliferated so quickly in the Garifuna communities. Rather, it explains how it may have entered the community.

To understand how HIV/AIDS infection proliferated within the community, one must take a closer look at the social norms and individual-level variables that determine how this disease could be passed onto so many individuals in a relatively short time. To get a better understanding of perceptions of why HIV/AIDS prevalence elevated compared to the rest of the Honduran population, I asked the opinions of the people working with the Garifuna communities as well as the Garifuna. Through individual interviews with development organizations that have been working with the Garifuna HIV/AIDS problem, as well as according to the perceptions of the Garifuna as reported in focus groups, major discrepancies were discovered in the perceptions of these two groups. The development organizations believe that the HIV/AIDS virus spread so rapidly through the Garifuna communities because of their social norms, including sex with multiple partners, especially concurrently, as well as early sexual debut. The Garifuna do not share these views; rather, they believe that the high prevalence rate stems from outside influences and the environmental circumstances of their communities, such as media, drugs and alcohol, and racism.

The social norms inside the communities causing high HIV/AIDS rates

The development workers and Garifuna have similar perceptions of Garifuna social norms relating to sex. Garifuna youth have an early sexual debut early and the men have the propensity to have multiple partners. What they disagree about are the reasons for the occurrence of these norms. In this section I look into the perceived sexual norms of the Garifuna and elaborate on some of the underlying reasons for this behavior from the development organizations’ and the Garifuna’s perceptions.
Multiple Long-Term Partners: Myth, Fact, or Tale from the Past?

When asked about Garifuna sexual norms, many of the interviews with development organization personnel included discussions of the cultural practices of the Garifuna, including having multiple long-term partners. The development workers attributed this practice to the Garifuna’s cultural heritage from Africa. In the words of one interviewee, these “non-casual” partners are usually in the same community; the male will maintain several households with these women.

Having multiple long-term partners can be problematic for prevention programs trying to promote the ABCs, when fidelity has a different meaning for Garifuna. From an interview with an international development organization representative, the very question of what fidelity is comes into question when it comes to working with the Garifuna:

It was a case before and I think it is becoming less and less true, but men have several…not like casual partners, but men would take on several permanent partners and actually maintain several houses. And that is a very interesting thing with the Garifuna, because when you talk about things like fidelity and they have three permanent partners and they are faithful to all three partners, they consider that to be a monogamous relationship. …until recently, men would retain various households in the same community.

From the in-depth and focus group interviews, it was ascertained that the Garifuna believe that polygamy is not practiced to the extent that was in past generations, and is no longer practiced by younger generations. The history of this practice was revealed in interviews with development agency representatives who discussed the Garifuna’s vocational tradition of fishing as one reason behind the Garifuna having multiple partners. Garifuna fishermen, who are gone for extended amounts of time, have multiple partners in various ports of call along the northern coast of Honduras and the Bay Islands, as well as the Guatemalan and Belizean coasts. As one development worker replied:
...fishing is a big part of their livelihood and a lot of the men are gone for several months at a time. They get on a boat and they are gone for months on end. So these factors contribute to people having additional partners.

Some perceive that women who are married to fishermen have some latitude in their usual monogamous lifestyles. These women often take on additional long-term partners because of the long absences of their husbands. As one development organization representative stated:

…it is acceptable in the community when a man goes to fish, when he embarks for months and the woman remains only in the community, it is not seen as bad by the other women in the community, for the woman to have a romance with another man. When her husband returns, the other partner separates from her, and this is seen as normal. . . .

The practice of fishermen having multiple long-term concurrent partners has been well established as a cultural trait of the Carib Indians from which the Garifuna partially derive their historical and cultural background (Gonzalez 1988). However, many Garifuna argue that the Garifuna do not have any more sexual partners than the Latino population. They believe the Latinos are “slyer” and “under the table” while the Garifuna are more “open” about their multiple long-term relationships.

The fact that Garifuna might have multiple long-term concurrent partners could be the difference between Latinos and Garifuna HIV/AIDS infection rates. Research has shown that individuals having concurrent partners have greater risk of contracting HIV/AIDS than serial monogamists (Morris 2004). People with concurrent long-term partners are less likely to use condoms “with a partner they trust.” Bearman et al. (2004) found that among social networks constructed of multiple concurrent long-time partners, participants were more likely to trust their partners and therefore not utilize condoms in their sexual relationships.

Whether polygamy is still practiced, many respondents in the male and female focus groups still maintain that it is the right of Garifuna males to have multiple partners. Although
there are some contradictions about whether women can have multiple long-term partners, it is not only accepted, but viewed as natural for men to have multiple partners, as explained by this male Garifuna respondent:

Look, for us, I don’t know, how can I say this? It is a part from our ancestors from the times past. However, when it is the woman, it is not seen well. They must have only one man, only one partner, although they would like to have it both ways. But because we were raised this way, for a long time here, this is the way we see things, in this manner. Maybe it is because of Machismo, I do not know, because it is the way we do things here.

According to the Garifuna’s perceptions, it is only condoned for women to have multiple partners when they are in need of resources to support their household, and only if they are long-term. Men, on the other hand, are not only allowed to have multiple long-term partners if they can financially support them, but they may have multiple short-term partners also.

**Understanding why the Garifuna have so many partners**

Everyone interviewed gave a “matter of fact” response to why Garifuna have a problem with HIV/AIDS. When asked, “Why do you think that HIV/AIDS is a problem in these communities?” the answer inevitably produced was some configuration of, “Because the men have too many sexual partners.”

All seventeen interviews with development agencies and all of the twelve Garifuna focus groups agreed that “other” Garifuna males were engaging in sex with multiple partners. However, there were different opinions about why the Garifuna men have more partners, or whether they have more sexual partners than their Latino counterparts in Honduras.

Taking a closer look at, “Why do Garifuna have multiple partners?” many opinions vary on this subject. The development agencies tend to blame the Garifuna’s propensity to have multiple partners on their social norms. For the Garifuna themselves, the older people blame the outside world, the women blame the men, and the men blame other men’s behavior. To better
understand the perceived underlying factors as to why the Garifuna have multiple partners, one must look at gender power dynamics, the age of sexual debut, and how extrinsic factors of the outside world may have influenced these phenomena.

**Double Standards in Garifuna Partner Acquisition**

No other question brought up such drastic and dichotomous answers from the focus groups than when they were asked, “What do you think of a man who has multiple partners?” with the follow-up question of, “What do you think of a woman who has multiple partners?” As seen in this male focus group:

In: What do you think of a woman that has had many sexual partners?
Remundo⁴: That they are a risk for infecting us.
Fernando: They are whores.
In: All of them?
Fernando: Yes, and they are going to infect us all in town.
Remundo: When I hear a story like this I am going to talk to her and she will answer with her suitcase.
Rafael: She is nothing but a bucket and you don’t know what’s inside. They would die in this town if they were brought here.
In: What do you think of a man who has many sexual partners?
Rafael: He is a man.
Fernando: That is what men do. He is a ladies man.
In: You have a smile. Why?
Remundo: Because he likes the theme.
Fernando: A man, that is a ladies man, we say, ‘Ching-ching’ (literally the sound of champagne glasses touching, or loosely “Cheers”)
In: Why?
Fernando: Because he is a hero. Because of his quantity (of women). I still can not do this, because I am ugly (laughing). But there are others here that can do it and they are very popular.

The attitude in the male focus groups was one of levity and joviality when talking about men who have multiple partners. They often laughed and smiled, and many wanted to speak on

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⁴ All of the names in focus group conversations reported here are pseudonyms.
the subject. However, when the subject of women with multiple partners came up, the jocularity ended abruptly and a serious tone entered the dialogue.

Having multiple partners is seen as a male privilege, as can be seen in this other male focus group.

In: What do you think of a person that has various partners, both the men and the women?
Jesus: He is a champion.
Paco: It is like ‘cheers!’
In: And when the woman has two partners?
Jesus: She is a whore. She is a ‘Fox’, that is what we say.
Paco: We are able to have 2-5 partners, but the women, no.
Jesus: “Because with the woman, okay, it is below their moral standards for them. It is not the same for them, if they sleep with this one and with this one, all of the town will know about this.
In: What do you think of a man that has two partners?
Jesus: It is a man’s game, and he knows how to play it.
In: Then they (the women) agree to have two partners?
Pablo: No.
In: What do you think of women that have many partners?
Paco: They are prostitutes.
Ernesto: They are gargoyles.
Jesus: They do not deserve you, or your gift.
Paco: Throw them off a bridge!
Pablo: With about three cement blocks so that they can not return!

Both the men’s and women’s groups answered alike, that it is a man’s prerogative to have multiple partners—no matter how much women dislike this gendered privilege, they concede to it. As seen in the women’s focus group discussion:

In: Do women do the same thing? Go from man to man?
Maria: Sometimes.
Iris: But they are prostitutes.
In: So what do people think about women who do that?
Maria: They think a lot about her.
In: Do they think badly of her?
Iris: Yes.
In: What do they think of men who do that?
Iris: It’s normal.
Maria: They say, ‘But I am a man, I can do it. You are a woman, it isn’t good.’
In: So it is a different standard?
Maria: Yes.
Iris: Machismo. They call it Machismo.
Maria: When a man has 5,6 women, they say, ‘Oh, how macho. I am a real man.’
In: Is that what makes a real man?
Iris: Yes, they think that.

One of the reasons for the high rate of multiple partner acquisition among the Garifuna could be the Latin American phenomena of Machismo, or literally, the act of being a man. Machismo directs how men look and act in their society, where in Latin America this can take on the outward show of being a man through demonstrations of being the breadwinner at home as well as the boss, and of popularity with women outside the household.

It is agreed by both the development organizations and the focus groups that Machismo plays a role in men seeking multiple partners. Men are expected to have multiple partners because of their gender role. From the female focus groups and development organization interviews, many Garifuna women are expected to accept male philandering because of gender roles. However, even though women may be suspect of their partners’ womanizing, they do not have the ability to negotiate condom use from their partner because this would be seen as a questioning of their trust. Although development organizations are teaching women about HIV/AIDS education and prevention, there is some question how much good this is doing because women do not have any voice in the male having multiple partners or condom use.

Development Organization Representative: You sensitize the women to HIV/AIDS and condom use, but then you have the men who have the power of money, so it is a very complex thing in my perspective, the issue of Machismo. And at the end, I think it is an economic thing that really drives the whole thing. That it is the man that has the access to money, to dollars that is the issue.
Although the belief and acceptance of Machismo still exists, there does seem to be some movement by the males to understand that having multiple partners is a danger to themselves. Men in the focus groups are beginning to discuss using condoms with short-term partners and some mentioned a risk in pursuing multiple women.

Women grudgingly accept that men are going to have other partners; they also are frustrated by it, as seen in this exchange in a female focus group:

- In: Do men have more than one partner?
  - Amparo: Yes, but we want them with just one partner.
- In: So, do you watch them to make sure that have only one partner?
  - Amparo: Yes! You got it!
- In: Do you trust the men?
  - All Women: No! (Laughing)
- In: Why?
  - Diana: Because men are unfaithful. They always want more women. Because they like to drink a lot, and when they do, they want more women.
  - All Women: Yes!

According to the focus groups, women are viewed as having a passive role in dating and are to wait for the man to “make the first move.” This passive role could have some effect on women when it comes to their negotiating condom use during intercourse. Since women are supposed to be so passive about their role in courting and sex in general, this could impinge on their capability to insist on condom use. This aspect can be seen through this interview with a Garifuna community worker,

- In: Do you think that Machismo affects the woman’s decision to use condoms?
  - Female Community Worker: Yes, because when I talk with women and question them, ‘Why don’t you use a condom?’, they say that they are ashamed to ask, it is not their decision to use a condom. It is for the man and it is their decision….the man knows the woman and they have her trust ahead of time, so they know that they can have a relationship with them without the use of condoms.

One of the reasons that men often are exonerated for their actions is the fact that many people in Latin America believe that the male sex drive is on a primal level, much like thirst and
hunger. They believe that men require sex and are pushed into sexual intercourse (Glasman and Albarracin 2003). This can clearly be seen throughout the focus groups; the belief is held not only by the males, but the females. Many of the males believe this is fueled by women being overtly provocative and sexual, driving them wild with their feminine wiles. This phenomenon can be seen from the responses gathered from male focus groups in response to the question, “What differences do you see between men and women when getting dates?”:

“Because they can charm you.”
“She wears clothes that suck you in. They dress sexy and you go crazy then. Crazy in the head! Then you want to have a little date. On the first date you don’t need anything, you are so dizzy with your horniness!”
“We are weak for women.”
“For a man, if he calls...sometimes the woman is not interested, while if a woman calls a man, he comes running!”

Having the ability to make decisions about condom use and gender power dynamics goes beyond the usual social taboos. Many of the Garifuna women depend on their male partners as a much-needed source of income. Women who are desperate for economic resources from their partner may be less likely to upset their partner by asking him to wear a condom. This act could be seen as a matter of a lack of trust between them, as in this reply from a development worker:

I mean if you are in a position where you are relying on someone else for your livelihood or you can’t always afford to insist on certain behavior and I think this especially plays out with women in negotiation with condom use with men. You know a lot of women, we just say to them, ‘Tell your husbands to use condoms.’, but it is just not that easy. I mean women rely on their husbands for economic support and also emotional support and it is just not that easy for them to just create that situation in a relationship.

The implication of a woman asking a man to wear a condom violates trust; some development workers say that the only way they can get the women to have their partners wear condoms is to broach the subject as birth control, as seen in this Garifuna community worker interview:
I tell the women to justify the proposal of condom use in a way to their partners in that they do not want to become pregnant. The (Garifuna) women would never propose condom use to prevent HIV or anything like this.

Trust has a huge role in condom use. Women who have a history with a man do not perceive the need to use condoms.

Development worker: “A woman will be in love with a man and not use a condom, because the man will know the woman and have the trust of her ahead of time, and so they have a relation without the use of a condom.”

Trust also can have a stigma for women, in that women who would purchase or carry condoms with them would seem untrustworthy. Women themselves know of this perception by men and they think that to have a condom on their person could be, in the words of one female focus group participant:

“…temptation. Because the flesh is weak and we are encountering some temptations and for this when there is condoms…”

Gender power dynamics enable Garifuna men to have multiple partners and negate any negotiation of condom use. The belief that men cannot control their sexual urges and are in need of constant sexual gratification supersedes many of the individual rational behavior models on which the preventive programs are built. Unequal use of trust breaks down the negotiation of condom use. Condom use can only be negotiated when barriers of trust for both sides become equitable. Women who want to negotiate condom use are seen as mistrusting their partner, while women who have condoms are viewed as morally corrupt and suspected of multiple partners. Until issues of trust are broached, condom use will continue to be a tenuous issue at best.

**The age of sexual debut**

One way to increase the number of sexual partners one has in a lifetime is to start sexual activity early. Past research and this investigation both support the perception that early sexual
debuit is occurring within the Garifuna community. The age of sexual debut is almost universally agreed upon to be “too young”. However, what is not known is why the Garifuna start sexual activities early and what the Garifuna view as the right age for initiating sex.

Perceptions to what should be a correct age of sexual debut were ascertained through two questions; “How have things changed in this community in the last five years due to HIV/AIDS?” which many participants volunteered information that children are starting sexual activity too early. When pressed for what too early meant, most of them agreed sexual debut that they knew to have started too early in their community was between the ages of twelve and fifteen, but some answered that they knew of some that started as low as eight.

When faced with the question, “How old is the right age to have sex for the first time?” there was some variation in perceptions between the different gendered focus groups. Women agreed that the age that people should have their first sexual experience should be between the ages of eighteen and twenty-one. They consider this to be the right age because they believe that by this time the person considering sex will have had enough time to mature and had the chance to finish secondary school and the potential to find a job.

However, males did not have as easy a time distinguishing the correct age to start sexual activity. Many of the male groups thought the age to start sexual activity would be between the ages of fifteen and eighteen; however, there were dissenters from this opinion. In one focus group, there was a huge rift between school students and fishermen. A leader among the fishermen thought the age should be twelve and this opinion was agreed upon by all the fishermen. Despite this precedence, the students tended to choose the age of eighteen as the ideal age for people to begin having sex, so they can have time to complete secondary school. These students were heckled for their opinions by the fishermen, which pinnacled at the point where
one student said he wanted to wait until he was twenty-one to have sex, so he could complete studies at a university. The fishermen at this stage erupted into laughter and had to be calmed and reminded that everyone has the right to an opinion.\footnote{I felt that there was a certain amount of bravado to the atmosphere of some of the male focus groups, especially to questions regarding age of sexual debut and opinions of having multiple sexual partners. At times I question whether or not the answers of some of the focus group participants were being swayed by bravado and an attempt to exude machismo.}

This group was not unique in the separation of opinions between mid-twenty working males and late teenage to early twenty secondary school students. In another group, two focus group members had to be reprimanded for mocking each other. Again, one working class man was under the opinion that someone who is twelve years old is old enough to start sexual activity under the premise that someone who is twelve years old was “curious” and “are educated away from the home in sex education.” The other man who had completed secondary school, was under the opinion that, “I respect your position, but a boy of 12 years, is not prepared physically, nor psychologically.”

The rift between working class groups and student groups could be one of education and life course. Students may have had more likelihood to receive HIV/AIDS prevention education and will therefore want to abstain from sex for awhile. Students may also not want to risk sex for fear of pregnancy negating their ability to continue in school, while working class men may have already established jobs and are ready for families.

People with working-class vocations may also rely on Machismo more because they have lower social status. People of lower socio-economic status will not have the means to show status through wealth and may have to rely on sexual prowess and large families to show off status in the community.
Whether this early sexual debut is something new or has always been a social trait of the Garifuna is debated among the interviews conducted. Some believe that the Garifuna have always debuted in sexual activity early, while others believe it comes from more recent outside influences.

**Outside influence on Garifuna**

Garifuna focus groups relayed their worries that the outside influences of drugs, alcohol, and the mass media have had an adverse effect on the Garifuna youth, causing them to begin initiating sexual intercourse at an early age. The drugs and alcohol work to inhibit the Garifuna’s rational choices about sexual intercourse, and the mass media subjugates them to an over-sexualized culture.

One of the concerns in the Garifuna community is the perception of youth’s easy access to cocaine and marijuana. They feel that drugs negate women’s inhibitions about sex and allow males to have more partners. This fear is expressed by Garifuna adults, who responded to the question of, “How has the community changed in the last five years in concerns to HIV/AIDS?” by saying:

> What I say about AIDS is that there are youth that are too drunk, they are too full of drugs, and sometimes when they go with a woman to them nothing is important. One knows the consequences and they know not to go with a person here, from (children) eight to nine year old are taking drugs and alcohol. When they do this, they don’t know what they are doing.

While drugs are seen as a growing problem in the Garifuna communities, alcohol is alleged by the development agencies to be a much more pervasive problem for Garifuna youth. According to development workers, alcohol is sold at “every family run corner store,” and the consumption of alcohol by youth is at “another level.” “Alcohol has changed their behavior and I have seen this.”

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The younger Garifuna focus groups do not necessarily have an opinion about whether alcoholism is pervasive in communities or not, but they do see people in their age cohort make “poor decisions” with regard to sex while under the influence of alcohol. One focus group viewed drinking as making people “not responsible for their actions” as seen from this part of an interview with a female Garifuna focus group:

In: So why does the drinking matter? What does the drinking do?
Lolita: It makes it more able for a man to be with a woman. You understand. Because when you are a baby, we know that you cannot control what you do.
In: Why does the drinking make the person more at risk?
Lolita: Because when you are young you do not have much control over yourself. And when you do not have control, you can pass things on. Because we know that when you have sex without protection, but with drinks we do not think of this. And when a young person is drunk, they have no control, and it is very rapid to have sex.

Many Garifuna elders and Garifuna NGO members perceive the Garifuna youth as abusing alcohol more so than in the past. Many feel that the problem of early sexual debut is being exacerbated by a combination of drugs and alcohol-numbing inhibition, with the youth’s interest in sex is being piqued by the media’s portrayal of sex. They feel that media has something to do with the heightened sexual awareness and openness of the youth to sexual experimentation. Much like anywhere else in the world, the Garifuna communities live with the outside influence of modern day media, having access to television, video players and CDs. With this comes a flood of sexual innuendos in rap music, overt flirtation and simulated sex through Mexican soap operas, and in some cases watching sexual intercourse directly through pornographic movies. Many development organizations and some of the older Garifuna focus group members even became apoplectic about the media when it came to youth’s sexuality, as can be seen in this older Garifuna focus group participant’s comments:
…children learn about it (sex) is when they watch television, especially the soap operas they see, and what they do on them! The children can learn this way that is the first thing that they are going to do, because of this now they are full of it, okay?

There has been much debate and research on the interactive effects of sex, violence, and the media and their effects on youth behavior. There are also differences of opinion between the Garifuna and development workers about whether the media are offering Garifuna youth their first interactions with sex. Multiple development agencies made comments on the Garifuna custom of communal living with multiple extended family members living within the same house. This communal living includes many family members utilizing a communal sleeping area, where the Garifuna youth are subjected to hearing or seeing family members engage in sex, which they believe is influential, as heard in this interview with a development worker:

…a ton of people live in each room, everything is in common there. There is not private space for anyone. So that all of this is influencing, so many young can often observe when their mother and father have sexual relations, because they are living communally. So there are things that they see and for them it is normal. Then when their older brothers get old enough, when they have a girlfriend, they come to the house and then they have their relations in front of them.

Whether it is the new outside influence of media, or drugs and alcohol that are influencing the Garifuna youth to early sexual experimentation or it is normative behavior and communal living conditions, Garifuna youth are starting sex early.

**Socioeconomic Effects on HIV/AIDS Infection**

Some of the socioeconomic explanations for the higher HIV/AIDS infection rates among the Garifuna were explored at the beginning of this chapter, but the discussion did not go into any depth, nor incorporate the perceptions of other international development organizations and Garifuna focus groups. Rather, I highlighted an interview with a Honduran Health Ministry expert who has been involved in a plethora of research in this field. What needs to be further
explored is whether poverty and discrimination could have helped spread HIV/AIDS infection rapidly through the Garifuna community.

**Poverty**

Poverty in itself does not spread HIV/AIDS—this occurs only through direct contact with the virus through sex, intravenous injection, blood to open wound contact, or breast milk. However, poverty can push people to act on some of these behaviors, thus enabling the spread of the disease. As stated in one development agency interview:

…poverty puts people in situations where they take risks that they wouldn’t otherwise take. I mean if you are in a position where you are relying on someone else for your livelihood or you can’t always afford to insist on certain behavior …poverty drives people to do things like engage in sex work, which puts them at risk. So, poverty is a huge issue.

Poverty can also lead to desperate behavioral actions such as drug and alcohol use, as well as the feeling of hopelessness, which results in poor decision making. This section looks at some specific repercussions of poverty that were directly mentioned in the interviews. The aspects of poverty that emerged as key themes in the interviews are the inability of Garifuna to access educational and medical resources, prostitution, and migration.

**Limited Access to Resources**

Poverty correlates with HIV/AIDS for many reasons. One reason is the lack of resources for traveling to medical clinics, and the means to pay for treatment or pharmaceuticals.

Development Organization Representative: at Tela hospital …for example a Garifuna person living with HIV that lives in [around] Trujillo… they do not have health centers to speak of, so they come to Ceiba for the centralized medication. So a person that is living with HIV that lives [around Trujillo] does not have the money, they do not have anything… is not going to go for their medicine because they do not have the money. They prefer to spend the little money that they have on food rather than on a bus ticket to go to Ceiba. In their communities there is only one bus in the day, so when they reach their destination, to their consultation, they have to sleep there. Now they do not have the money for a place to sleep, nor to eat for the day in Ceiba. So in reality, to go to Ceiba for
their medication and to see a doctor, for the Garifuna it is really limited. For people that now are living with HIV, it is limited.

Having no access to health facilities greatly diminishes the chances of Garifuna getting HIV/AIDS testing and counseling, as well as possible treatment. Lacking access to adequate health facilities also can limit the Garifuna’s access to information about HIV/AIDS. Magnifying this lack of health care access is the fact that many Garifuna do not have access to secondary schools, which in many HIV-plagued areas have served as a gateway to prevention information and given students the cognitive ability to understand why they need to change their behavior.

Lack of resources for health clinics and lack of secondary schools force many to rely on folk medicine and traditional beliefs. International agencies have had encounters with irate older Garifunas who believe that HIV/AIDS is a spell put on the victim by an ancestor that is not being honored correctly. Desperate Garifuna who are HIV positive, turn to buyes, or traditional healers, for cures. Many of the cures revolve around natural herbs and medicines, while some of them take the modern spin. One focus group participant described a “of concoctions of moth balls dissolved in alcohol” that is then imbibed, which could directly kill the patient.

**Prostitution**

Even though many of the people in the Garifuna communities face financial hardships, these hardships are not shared equally within their community. Specifically, it seems that a disproportionately number of women and children face poverty within the Garifuna society. Women often do not have the same job opportunities as men and many have dependents. Development workers talk about the many Garifuna women who are single mothers.

Development Worker: More and more women are working outside the home. The relationships between men and women here are really interesting because it is very common here to have single mothers, women have children at a very young age and the
men don’t often stay around. This puts women in a very difficult situation. They’re alone, they’re raising these kids, they don’t have a lot of job opportunities. Employment is a huge problem in Honduras; there is a lot of unemployment and underemployment. Salaries are very low. The cost of living is a lot higher than it used to be…. People make choices based on that, that aren’t always the best based on their health, but kind of, ‘what can I do to get by today?’

Women who do have partners cannot always rely on their partners for resources. Many of the development workers and even the Garifuna men themselves admit that they are not reliable providers of resources. Males would rather spend them on “alcohol and fancy clothes”, as seen in this male Garifuna focus group:

Hugo: A man that does not hand his wife the money will spend it in the street, more than women with their friends. The man [if he] has another partner, sometimes they will leave their children without food to go into the street to spend money.
Renato: It is true.

Development workers believe that one of the Garifuna social norm is to allocate many of their finances toward material goods, such as clothing and jewelry, to give themselves an appearance of being of higher public status. This is especially true for those receiving remittances from relatives in the United States.

Development Organization Worker: …in the Garifuna communities, you are going to see the girls looking very neat, very well dressed. This includes many of the boys, who have name brand labels and things like this. Because this is the system from which they have come to live, okay. But in reality you see Garifuna youth well dressed, but if you go to their houses and you observe like where they live, how their kitchen is, how their bedroom is and they live in communion, a ton of people live in each room, everything is in common there, there is not private space for anyone, they don’t have a lot of money.

Having little access to jobs and in desperate need of resources, women can be pushed into the risky behavior of prostitution. Development workers perceive Garifuna social norms as encouraging each other into allocating much needed resources into the outward appearance of having money, by purchasing clothing and jewelry, thus the perceived need of women for sugar
daddies. Some development workers had very strong opinions of Garifuna norms and behavior, which could be construed as racist or discriminatory. However, although the Garifuna may spend more resources on clothing, rather than their house, one does not know if the appearance of their house, nor the amount of people that sleep in a room is as important to the Garifuna as it might be to others.

Development workers believe that this choice may be a little easier because the Garifuna have the social norm of partaking in transactional sex for goods and services within the community, but not necessarily for money.

Development Organization Worker: The Garifunas’ communities use [prostitution] by the fact of being quite poor community because there isn’t enough. What they do is exchange sexual services for, and not only is there an exchange of money or food, but there is a exchange for clothes for example. So then that occurs a lot, very clandestinely with the sexual workers. So this is a factor that is a very dangerous risk, so then we did not catalog them, but nevertheless they are having sex in exchange of receiving a good, not only money, there are other things that is enough to commence in commercial sex.

Other development workers believe that Garifuna women take advantage of their communities being a major tourist destination in Honduras and engage directly in prostitution. However, most Garifuna women do not actively seek prostitution in their communities because of the stigma attached to it. Rather, they have “sugar daddies,” which for the most part are Garifuna males who have immigrated to the United States and periodically visit, and with whom they have transactional sex.

Development Organization Worker: Yes, the prostitution in the Garifuna community is very hidden, very hidden, okay. All of this I am saying based on the formative research that we did two years ago. The Garifuna communities that are visited by a lot of foreigners, so a lot of commercial sex occurs and in a manner, let us say… it has now been well identified, okay. The sex worker in the Garifuna communities, you can be talking to one and not know it. And also not only with tourists, but also within the same community, since there are so many people in the United States, that they travel and when these men come, they bring money and in the communities there are many needs, so there is sexual work.
Poverty drives behavior in different ways, making women look for scarce resources within any means possible, namely prostitution. Although poverty can push women toward this decision, the Garifuna seem to have a system of informal prostitution in place that may make it socially more acceptable. Garifuna women can exchange sexual favors for goods or services in their community, rather than money, to “sugar daddies” or certain stable partners who help the women with resources in exchange for sex. Although there is little research on sugar daddies in Latin America, there is extensive research on this phenomenon in sub-Saharan Africa.

This informal system of exchanging gifts and services for sex, or “transactional sex”, has occurred in sub-Saharan Africa for some time (Standing 1992) as a “coherent and distinct form of sexuality in sub-Saharan Africa” (Caldwell et al. 1989, p.187). Many researchers have thought that the “sugar daddy” system of transactional sex has been a major driver in the spread of HIV/AIDS in southern Africa, due to the high HIV/AIDS rates of young African girls in comparison to boys (43% to 17%, respectively) (Hunter 2002), although research now tends to believe that the “sugar daddy” phenomenon does not seem to be widespread (Luke 2005).

For many Africans, the exchange of gifts for sex falls outside their definition of “prostitution” and is seen by both young women and older men as a symbol of prestige, as the women get nice clothes and connections to economic status, and men get to prove their virility and self-esteem (Bassett and Mhloyi 1991; Hunter 2002). However, since African men have become aware of HIV/AIDS and how it is spread, men now also seek out younger women as a strategy to lower their risk of HIV/AIDS (Nyanzi et al. 2000; Orubuloye et al. 1993; Rasch et al. 2000). Women who participated in a research project by Silberschmidt and Rasch (2001) did not believe that women should have sex for their own gratification and any “self-respecting woman”
would not give sex to their partner for free. In fact, many parents of girls who have sugar daddies actually know about it—they choose to ignore it because they believe that the sugar daddies allow them to have fewer financial responsibilities for their daughters (Silberschmidt and Rasch 2001).

Women who do engage in transactional sex with sugar daddies often do so with more than one, and they are less likely to use condoms with them (Luke 2005) because “they look clean”, and they may lose them and their financial support (Silberschmidt and Rasch 2001). Because of the lower use of condoms with sugar daddies and what appears to be an incorrect belief that it is widespread (Luke 2005), many international agencies have heavily promoted the avoidance of sugar daddies by young women in Africa. In a pilot project in Kenya, a health promotion project educating young school women about their increased likelihood of becoming infected by HIV/AIDS from older men has shown that although they have not decreased their sexual activity, they have decreased their sexual activity with men who are much older and they have a lower HIV/AIDS infection rate than a control group (Dupas 2006).

**Immigration**

Lack of economic opportunity in their community pushes Garifuna to leave their community for financial reasons. Due to the norm of multiple partners, and their lack of ready access to normal partner(s), Garifuna men often seek sexual partners in their new environments. The immigrant male will utilize prostitutes or live in areas of high population density where they have access to more sexual partners. This greatly increases their chances of contracting HIV/AIDS, which they can bring back to their communities on the north coast.

Garifunas have had a long history of immigration to the United States to seek their fortune, specifically New York City.
Garifuna Community Worker: [The Garifuna have] a long standing experience living in the [US]. Early in the 1910s and 1920s the Garifunas were going into the Northeast of the United State. There is a larger Garifuna community in New York than in the North Atlantic coast of Honduras. And you see the difference in the economy of the family. When they have a key member of the family in New York, you start seeing brick walls and nice roofs and those are the main markers.

For decades, the immigration process has been a net positive for the Garifuna in many ways, providing much-needed resources to the impoverished communities lining the north coast. When walking through the Garifuna community, the immigration status of the family can often be seen by the construction of their houses. This status is noted by development workers who work in the communities.

Development Organization Representative: By the economic migration to the United States there has been a lot of change in the Garifuna communities in this case. I am from (A Garifuna Community) and there is money there. Not a lot, but yes, the life conditions are better. They are much better in infrastructure, education, economic availability; yes it has improved.

Resource Adonis’

Due to this increase in resources, many females have traditionally viewed returned Garifuna emigrants from the United States positively as potential partners. Development organizations believe that the Garifuna emigrants’ status is enhanced by their clothing—emigrants return with “fancy clothes,” “gold chains,” and “shirts with labels.” As one Garifuna female puts it:

When they return another time to here, now we look at them differently. Although they are ugly, although they say the same things, now they live different. The men and women look at them differently; they bring goods here and the clothes.

This preference for Garifuna emigrants from the United States has changed over time. The introduction of HIV/AIDS into the Garifuna communities coupled with the understanding of HIV/AIDS and how it is spread has caused a backlash for the emigrants. Many Garifuna women now not only do not favor these men but, on the contrary, they are often seen as an anathema.
Perla: Sometimes, when you don’t see them for some time, like ten, eleven, or twelve years. And we don’t know if they had it. If they are sick or what.

Luz: When he goes, now I do not have the same trust with him, because he has spent a lot of time in the US. And there are a lot of women there and you can find every kind of woman.

In: So when a man comes back, do lots of women want to date him, or don’t want to date him?

Perla: Not many.

Luz: There are some that take precautions because one does not know in what conditions the people come from there and it is here when they show up looking pretty, but you do not know what is going on inside. Those rosy lips those rosy lips come infected.

Perla: “The people are mistaken. There are people that say that they are very handsome boys, but we do not know what is going on in the inside. I have always said that there are many stupid women, and the woman says that the man is talking to them so pretty. I say to them that they are mistaken in the attention that they are paying him. They taught us in school that I must resist for that reason.

This lack of trust occurred over time as more women perceived that their community was being infected by HIV/AIDS via Garifuna emigrants. This change in behavior and avoidance of Garifuna emigrants from the United States protected Garifuna women until they learned more about the person and built some trust before they become partners. However, discrimination can work both ways—as a way of curbing the HIV/AIDS infection, but also as a way of furthering it.

**Racism and Discrimination as a Factor in HIV/AIDS**

Racism has always been looked at as a factor in the spread of HIV/AIDS. The isolation that many minorities endure can make them avoid testing, not receive education, or not provide them with access to health facilities. Racism can also lead them to poor health behaviors and cause them mental anguish about the inevitability of early death. From the perspective of this research, racism and discrimination are treated differently. Racism focuses on the Garifuna’s perception that they are treated differently by the Honduran government, especially in regard to resource allocation and representation in government. In discussing discrimination in this
research, I focus on discrimination perpetrated by Garifunas to other Garifunas who are HIV positive.

Many Garifuna feel that they do not get the help and support from the Honduran government that they deserve. Some directly blame the Honduran government.

It is the low level of schooling, the low level of occupation, the low level of education, the massive emigration, the low level of governmental help. I insist that this is a Government responsibility.

The perception of the development organizations and the Garifuna are the same, that the Garifuna do have less access to resources that could have helped the Garifuna lessen the spread of HIV/AIDS infection. Many of the communities still lack economic, educational and social resources. Some focus groups see the government as:

Only showing up when the campaign and the attention is here. When the campaign is gone, it is only the (NGO) that is here for us. . But afterwards, after the [government officials] have gone back to their houses? Nothing.”

The Honduran government with its limited resources decided to split the tasks of primary preventions from tertiary care to the Garifuna. The international development organizations supplied the primary prevention by providing the community educators, educational material and curricula to the Garifuna communities to prevent HIV/AIDS. The Honduran government allocated its limited resources for HIV/AIDS to the personnel in the health centers and reduced the price of antiretroviral drugs for people suffering from HIV/AIDS.

Both prevention and medical assistance were needed and this plan seemed to be a good use of resources. However, this plan and the way it was carried out did not display the Honduran government’s reaction to the emergency. This hurt the Honduran government’s public relations
because its part in the action plan was not obvious in the Garifuna community, making it seem that the government did not react to the emergency while the international organizations did.

The other bad publicity that the Honduran government received from the Garifuna community in regard to its handling of the HIV/AIDS problem was its inadvertent targeting of the Garifuna as a group at high risk. By labeling them like other groups viewed by many Garifuna as deviants, such as prostitutes and men having sex with men, they felt discriminated against.

**The limelight depends on who you share it with**

As with many developing countries, Honduras completed a strategic plan that focused on at-risk groups that have higher HIV/AIDS rates than the rest of the country. When the research was completed, findings showed that the three at-risk groups in Honduras were: sex workers, men who have sex with men, and the Garifuna.

The Garifuna felt racially discriminated against, being categorized with these two groups. Unlike the other two groups, they were an ethnicity, and they viewed the other two groups as deviant. As a minority group within Honduras, many Garifuna felt they were combined with these other deviants for racist reasons.

The government and the agencies that have been providing interventions in the Garifuna communities have since begun to think of ways to reduce this perceived racism. They have done this through getting the Garifuna community involved with their planning and have broadened the scope of their prevention program to combat risky sexual behavior itself, rather than targeting specific groups of people, but the damage had already been done. Many of the people interviewed felt a little hostile about the perception that Garifuna are being more promiscuous and an “at risk group.” As one Garifuna put it:
Migration, is why there is AIDS. It was not born in the Garifuna communities... AIDS came because of the social movement that we have from mobilization, okay. It was bequeathed to us and it came and it came not only with us. It is with all of us here in Honduras. AIDS is in the south, it is in the north, it is in the west, it is in all parts. There are problems with the epidemic,...but we return to the same thing, we are stigmatized already after they had these studies of the Garifuna. Specifically in order to see that it happens in the sexuality of us and we are not different in sexuality. Okay, we are not the same as people in Africa. Only that we are equally black, Our form of life is very different, although we are the same black, but we are different.

Although inadvertent mistakes were made in studying the Garifuna, the Honduran government also indicated some directly racist views of the Garifuna communities. Some interviews with Honduran officials led to reports that the HIV/AIDS problem in the Garifuna communities was the result of “incest” and because their “very hot, sexual culture…shown in their dances”; “the heat of the north coast causes them to be horny”; and “their short, short skirts and short dresses.” These interviews left little doubt that these development workers believed that the Garifuna’s hyper-sexuality was to blame for their high HIV/AIDS rates.

Because the Garifuna have been targeted as an at-risk group, they have since been stigmatized in Honduras. Now many of the Garifuna are directly associated with high HIV/AIDS risk. As one Garifuna noted:

…if he is black, when he arrives at the hospital, they think it is AIDS …, we all want to break that discrimination that was in the hospital in the area. When a Garifuna comes with diarrhea that maybe it was the food that has caused it, but they say, ‘Ah, this is AIDS, (because) he is black.’ That is how they treated us. Nor did they talk to the people! But they have diagnosed what is AIDS without having a test. [It is] because of the stigma that we have all of this.

Racial discrimination by the Honduran government has caused distrust of outside officials and the avoidance of health facilities, but the Garifuna community is not without internal discrimination either. There is much perceived discrimination and stigma within the Garifuna communities towards those members who are HIV positive.
Discrimination within the Garifuna Community

Many things have changed in the Garifuna community as a result of the increased awareness and education of its residents about HIV/AIDS. At one time, discrimination toward HIV positive people in the Garifuna communities was rampant; some remnants of this discrimination remain. The discrimination has led to isolation in their community.

The interviews revealed that people who were HIV positive were heavily discriminated against and feared. At one time, people would not touch or share utensils with people who were known to be HIV positive. The fear of this discrimination caused HIV positive people to keep their status a secret from people, and people who feared they may be positive avoided testing for dread of the results. This fear of HIV stigma allowed the infection to spread through denial of status and avoidance of testing. This HIV stigma also forced people who did know they were HIV positive to use much-needed resources to travel long distances to seek treatment in other health facilities to avoid recognition in local ones, sometimes traveling seven hours by bus to accomplish this avoidance.

Conversations with the focus groups revealed that this type of discrimination has been curtailed. For the most part, many believe that they can not only interact with people who are HIV positive with no fear of infection, but they can also be really good friends with them. However, the males have an interesting perception of HIV positive people. If the woman is HIV positive, it is okay to be their friend and interact with them, but you would never want to marry them. Males look negatively at partnerships with females who are HIV positive because of their lessened chance of producing healthy children. Women, on the other hand, when given the same question, do not respond about the potential of future partners. They view the question as one relating to becoming caretakers, and they seem to take on the role without hesitation. Among
those directly asked if they would take a known HIV positive partner, some would not, while others would, unlike the men who universally would not take HIV positive people to be partners.

Summary

When looking at the major differences in perspectives between the international development agencies’ viewpoints and the Garifuna focus groups’, there is great disagreement on the major theme of why HIV/AIDS has spread so rapidly within the Garifuna community. The development agencies believe the reason of high HIV/AIDS prevalence is the Garifuna social norms around sex, specifically multiple partners, early sexual debut, and gender dynamics.

The Garifuna do not share this view; rather, they see the problem as coming from outside their communities, in the form of racism, lack of economic opportunity, drugs and alcohol and the portrayal of sex through the media. The Garifuna and development agencies agree that adolescents are starting sex early and that the Garifunas tend to have multiple partners. However, the Garifuna insist that they are not different from the rest of the Honduran population in these sexual norms. The Garifuna believe that the only difference in their sexual norms is that they are more open about acquiring sexual partners than the Latinos, who do it surreptitiously. Garifuna also believe that early sexual debut is more of a modern phenomenon than before, being brought on by the influx of mass media and drugs.

Government intervention programs that include the Garifuna in groups viewed as at risk, including men having sex with men and prostitutes, are leading the Garifuna to feel they are being racially profiled. This perceived racism and the lack of Honduran government personnel interactions with the Garifuna community in providing educational interventions has led to a discrepancy between the Honduran government and the Garifuna community. This discrepancy
has grown to the point where the Garifuna community has a general distrust of the Honduran government, which could be affecting HIV/AIDS interventions.
Chapter 9

Where the Garifuna Community Goes to Get Their Information on HIV/AIDS

With so many development organizations’ educational interventions being distributed to the Garifuna communities, it is difficult to know which are being utilized for information on HIV/AIDS. We do know that their HIV/AIDS knowledge is increasing, but other areas, such as attitudes and behavior are not. Since the Garifuna have issues with trusting outside sources, it is important to identify how they perceive information and whom they utilize for information. This chapter looks at Garifuna HIV/AIDS knowledge and the sources they trust for accurate information on HIV/AIDS.

Garifuna Background on Knowledge, Attitudes and Behavior to HIV/AIDS

Overall, access to HIV/AIDS knowledge is growing in the Garifuna population, and especially with the youth population. The NGO COMCAVI conducted a baseline study of the knowledge, attitudes and behavior of those with HIV/AIDS in the Garifuna communities in 2006 and found that large percentages of the Garifuna adult population and even larger percentages of the Garifuna youth population know what HIV/AIDS is and how it is transmitted (Table 9.1).

<table>
<thead>
<tr>
<th>Table 9.1: COMCAV Baseline of HIV/AIDS Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 COMCAVI HIV/AIDS Baseline Report</td>
</tr>
<tr>
<td>Adult Garifuna (N=302)</td>
</tr>
<tr>
<td>Know 3 forms HIV Transmission</td>
</tr>
<tr>
<td>Know correct information about HIV prevention through ABCs</td>
</tr>
<tr>
<td>Youth Garifuna (N=598)</td>
</tr>
<tr>
<td>Know 3 forms HIV Transmission</td>
</tr>
<tr>
<td>Know correct information about HIV prevention through ABCs</td>
</tr>
</tbody>
</table>
Interviews with Development agencies and Garifuna focus groups that took place in this study found that both perceive that the Garifuna overall knowledge base has grown considerably over the past few years, as seen in these interviews:

In: What have you seen in the last years?
Jacinta: Good and bad. On the one hand, I see it is better because before we did not talk openly about HIV, but now with these groups and these health talks, I say that we have changed a lot. Because now we can talk openly about a lot. Many people receive information and all of this. And they are doing things that is very important, so for me I say that there have been a lot of changes.

Development Organization Personnel:
I believe that now, like in the last maybe four or five years, the situation has changed. The people in the Garifuna communities now speak about HIV/AIDS; they touch on the theme to their children. The adolescents, they now have more information and now they are…like there is a raised consciousness in the communities in respect to HIV.

Many things have changed—not only open communication, but the information conveyed tends to be the correct information. The vast majority of Garifuna, especially the youth, now do not believe that witchcraft is the underlying cause of HIV/AIDS. However, from the perspective of the development organizations, there is a significant enclave of Garifuna who do not believe that HIV/AIDS exists.

Development Organization:
As far as HIV, the sexual behavior they have continued, maintaining them in many of the communities and many of the people do not believe in HIV. And that is a very big disadvantage that we have. Because they do not believe.

There is also worry among some of the development agencies that programs either consciously or inadvertently overly target Garifuna women. The development agency interviews and focus groups seem to point to a lack of male participation in educational meetings on HIV/AIDS and the fact that men tend to be the decision makers about safe sex practices. Therefore, if men are not a part of the equation, many worry that women alone will not be able to enact the behavior changes needed to curb the spread of HIV/AIDS. The nonparticipation of men
in health talks and information seeking is troubling, especially since so much of the sexual power dynamics lie within their domain of decision making.

Low turnout by males at the HIV/AIDS education meetings, however, does not necessarily indicate that because the males are not attending the informational meetings, they are not obtaining the information from other sources. However, the fact that many of the men do not feel comfortable talking to their prospective partners about sexual issues means they probably will not be obtaining information from women who are attending the meetings. There is an increased chance that when they do try to obtain information from close male friends and family, it will be incorrect information.

Another population in the Garifuna community that may be in greater need of HIV/AIDS education is the immigrant population in the United States. Because they are often not easily accessed and are illegal immigrants, some of the development agencies have noted this population’s need for HIV/AIDS education. Emigrants in general tend to be risk takers and are looked upon by many in the Garifuna community as well off and trendsetters, as explained in a development organization interview:

Development Organization Personnel: …and that (emigrant) will be the cool person, when he or she visits and that there is something else. You know that we tried to use that element to try to educate some. You know these people come for vacation for the summer, whatever, maybe some of them could be educators for the locals. So they will be a help to do that, but we realize that the locals, the Garifunas living in Honduras, are more aware of HIV/AIDS and HIV/AIDS prevention than the Garifuna living in the U.S.

There are weaknesses in the educational interventions, but overall the HIV/AIDS knowledge of the Garifuna is increasing. However, as past research has shown and as seen in the quantitative chapter, neither mass media, nor direct information from their social network is making much difference in health behavior.
Yet, there has been no proof that a quantitative threshold of HIV/AIDS knowledge is needed to tip health behavior. An individual need not be inundated with information to change behavior; rather, one who has an emotive link or deep trust of a single critical source who dispenses correct information about HIV/AIDS can determine behavior to lower HIV/AIDS risk. Thus this section of the qualitative study examines where the Garifuna are gathering their information on HIV/AIDS and whether they have a source of information that they trust more than others. Do mass media sources (such as radio dramas, theater groups, television, newspapers and pamphlets) or peer education/interpersonal sources (family, friends, school peers, school, health centers, and NGO community educators) hold more credibility? Where do the Garifuna look for this information and which source do they trust?

Issues of Quality: Best Knowledge Out There

In the interviews with development organizations and Garifuna focus groups, both were asked for their perceptions of where the Garifuna obtained their HIV/AIDS knowledge. Development organizations were asked where they believe the Garifuna are gathering their information on HIV/AIDS, while Garifuna focus groups were asked where they received HIV/AIDS information.

As seen in Table 9.2, the focus groups tend to have more members mentioning different ways in comparison to the development organization interviews. Development organizations also tend to list programs that their organizations provide and may not have a clear picture of what all of the other organizations are doing.
Table 9.2: Perceptions of Where Garifuna Receive their HIV/AIDS Information

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of Interviews that Mentioned</th>
<th>% From 17 interviews that were conducted</th>
<th>Source</th>
<th>Number of Focus Groups that Mentioned</th>
<th>% From 12 Focus Groups that were conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio</td>
<td>9</td>
<td>53</td>
<td>School</td>
<td>11</td>
<td>92</td>
</tr>
<tr>
<td>NGO</td>
<td>7</td>
<td>41</td>
<td>Family</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Health Center</td>
<td>6</td>
<td>35</td>
<td>NGO</td>
<td>10</td>
<td>83</td>
</tr>
<tr>
<td>Television</td>
<td>5</td>
<td>29</td>
<td>Radio</td>
<td>8</td>
<td>67</td>
</tr>
<tr>
<td>School</td>
<td>5</td>
<td>29</td>
<td>Television</td>
<td>7</td>
<td>58</td>
</tr>
<tr>
<td>Peer Education</td>
<td>4</td>
<td>24</td>
<td>Print Media</td>
<td>7</td>
<td>58</td>
</tr>
<tr>
<td>Pamphlet</td>
<td>3</td>
<td>18</td>
<td>Health Center</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Theater</td>
<td>3</td>
<td>18</td>
<td>Friends</td>
<td>6</td>
<td>50</td>
</tr>
<tr>
<td>Community Health Worker</td>
<td>2</td>
<td>12</td>
<td>Theater</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Billboard</td>
<td>1</td>
<td>6</td>
<td>Billboard</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Community Health Fair</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interestingly, even though school and family rate very high as sources of information in the focus group interview Table 9.2, formal health talks are perceived as the best (Table 9.3). However, there could be some discrepancy about what exactly a “health talk” is and who is conducting it and where. A health talk is a means of relaying a message, and it can be easily conflated with the place it is being held (often health centers and schools) or who is giving it (NGO, community health worker, or peer educator.) However, many of the focus groups do not list these categories separately.
### Table 9.3: Where the Garifuna Get their Best HIV/AIDS Knowledge

<table>
<thead>
<tr>
<th>Source</th>
<th>Number of Focus Groups that Mentioned</th>
<th>% From 12 Focus Groups that were conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Talks</td>
<td>5</td>
<td>42</td>
</tr>
<tr>
<td>Theater</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>NGO</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Radio</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Health Center</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Friends</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>School</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Family</td>
<td>1</td>
<td>8</td>
</tr>
</tbody>
</table>

Looking at the males, their “best” sources (Table 9.4) seem to come from a variety of places, all of them face-to-face, with the theater group being the best overall. The males then look to health talks, friends and school equally in second place, then finally NGOs and family as their “best” sources.

Females find the health talks to be their “best” source, perhaps because they have a better record of attending them, while they mention the radio dramas as their second choice, as well as friends. Their last listed choice is NGOs. None list theater, health centers, school or family as a “best” source.
Table 9.4: Comparison of Male and Female Garifuna Responses to Best Source of HIV/AIDS information

<table>
<thead>
<tr>
<th>Source</th>
<th>Male Garifuna Focus Groups</th>
<th>Female Garifuna Focus Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Interviews</td>
<td>% From 6 Focus Groups</td>
</tr>
<tr>
<td></td>
<td>Mentioned as Best Source</td>
<td>That Were Conducted</td>
</tr>
<tr>
<td>Health Talks</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Theater</td>
<td>3</td>
<td>50</td>
</tr>
<tr>
<td>NGO</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>Radio</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Health Center</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Friends</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>School</td>
<td>2</td>
<td>33</td>
</tr>
<tr>
<td>Family</td>
<td>1</td>
<td>17</td>
</tr>
</tbody>
</table>

Quality Issues

The issue of HIV/AIDS knowledge is not only how many sources people list because one quality source is enough to give the pertinent HIV/AIDS knowledge. The interesting part of this question is understanding which sources currently being delivered to the Garifuna are being remembered by them and why?

One of the reasons that mass media is not perceived by many to be the best source of HIV/AIDS information could be the lack of a feedback loop in the process. For the exchange of HIV/AIDS communication in the direct contact/social network, a feedback loop may be found between the information provider and the recipient. This loop allows the recipient to ask questions of the teacher and allows the teacher to ask questions of the recipients to make sure the information is being conveyed, processed, and understood correctly by the pupils. Mass communication, on the other hand, is a one-sided process, not allowing the source of the information to evaluate whether the information is being processed correctly at the point of the
exchange. This research then compares the responses from the focus groups between direct/social networks to mass media sources to get a better understanding of why some sources are perceived as better than others.

**Direct Contact with Information**

The focus group responses show that for any type of exchange on a personal nature revolving around sex, there needs to be a certain level of trust between the recipient of the information and the source giving it. Many focus group members have a comfort zone of opening up only to those within their same sex. Therefore, they often only seek out people, such as family members, school peers, or close friends that they trust, within their same sex.

Garifuna focus group members also trust established institutions that they have had contact with in the past, such as schools and health centers. Often times these community institutions are staffed with personnel that have a close tie to the community, if they are not a community member themselves.

**Family Members**

Although family members are not listed by many as their best source of HIV/AIDS information, for some Garifuna they believe that family members have the best intentions for the recipient of their information and they will take great care in leading them in a way that would bring them the least likelihood of danger and possible shame on the family.

For example, a male focus group participant responds:

Hector: I have talked with my family; they give me advice.
In: Do you believe that the information that you have received has been good?
Hector: Yes.
In: Why do you believe that the information has been good?
Hector: For me, it has helped me to think about these things well and about the consequences and the consequences that are brought up after.
The striking thing in this instance is that the family in many respects seems to act as a moral compass about the consequences if the focus group member were to engage in unprotected sex. When these focus group members received HIV/AIDS information, it also appears that they received a lesson in fear on the consequences of rash decisions involving unprotected sex.

However, as shown by the low number of Garifuna focus groups that list family as the best source of HIV/AIDS information, this comfort factor is not universal. A discomfort for some, still make a number of youth uncomfortable in talking about sexuality with their parents and adults in general. The comfort level for talking about sexuality is growing among Garifuna youth because they get information in school, but the adults are not getting this information and lag behind in their ability to talk to their children about sex, as perceived by this development organization:

Development Organization Representative:

[The Garifuna] now have more people that have had (AIDS), so they now have more people that have knowledge that HIV exists. Now all of the youth know more than the adults, but I feel that there has been a major change in the attitudes and the behavior of the youth also, but not in the adults. I do not feel like they follow the same pattern, the Garifuna young women are much more open to talk about the use of condoms and fidelity and all of this.

It is greatly acknowledged among development workers and the focus groups alike that very little information was being passed about sex and sexuality before the HIV/AIDS epidemic took place. Much of this seems to revolve around parents’ discomfort they had in talking to their children about sex. This is evident in this Garifuna Community Worker interview and the female focus group response:

Garifuna Comm. Worker: Because the Garifuna have their culture, when we are young, it is the culture, for example, the Latinos have more communication with their fathers, close to the theme of sexuality. And the Garifuna don’t talk that much with their parents about sex.
Garifuna Comm. Worker: Because they don’t have the trust when they are little to talk to their parents about sexuality to their parents. And the Latinos, I think do. They have more trust with their parents about sex. The Garifuna have more trust with their friends, or their close partners, or family members, but not with their parents.

Garifuna Comm. Worker: Something of embarrassment, yes. Because the parents don’t have the confidence to talk about sex either.

Ramona: Because of embarrassment, look it was in the manner for which I was raised. Also because you were born in a place that is more open than here. Okay our life with our parents in reality of things is always having this shame to talk to our parents and the parents say that they are our friends. Okay, for example, my mother has talked with me and still I, I have am certain that I have trust to start to talk to her, but...

Beyond the embarrassment in talking to their children about sex, some of the parents believed that if they were to talk to their children about sex, access to this knowledge would facilitate experimentation with sex. They believe that bringing up the subject can lead youth to curiosity and the desire to experiment sexually. This belief extends to anyone talking to them, including schools, as can be seen in these responses from female focus group participants:

Letizia: Sometimes (Garifuna NGO). The fathers and the mothers, truthfully, do not like to talk about this to their children, because they are worried that afterwards they are going to go practice what has been said.

Rosa: My mother never talked about sex with us. I always talked about sex with my older girlfriends. I would overhear them talking about sex and sometimes they would talk to me with confidence. Not everybody has this opportunity.

Suyapa: Because before the mother never talked (about sex), and it is rare to find a father that talks with his children about sex. But the truth is when they tried to have health talks in the schools they made a committee of parents of the families and they then cancelled having the health talks in the school and up until then, in primary school from third grade until sixth grade we talked about sex.

The challenge with Garifuna families in regards to information revolving around sexual themes is that for many Garifuna, they feel that the only people who have the right to educate
children about sex are the parents of the children. However, many Garifuna parents either feel a great discomfort in talking about sex with their children, or feel that talking about sex will spark their interest in experimenting in sex. This phenomenon is further illustrated in the next section among extended family fostering children.

**Whose kid is it anyway?**

Another complication in educating youth stems from children who are being cared for by extended family because a parent or parents have died or, especially in the Garifuna community, have immigrated for financial reasons. Extended family members fostering the children do not seem to be able to overcome the awkwardness involved in talking about uncomfortable subjects such as sexuality. This can be seen in this reply from a male focus group member, as well as a female focus group member:

**Pedro:** Okay, in reality no, not that we say because I, it is sad that I do not have a mother, she has died, and my father, I do not live with my father, okay, my grandfather no, he no, we do not talk a lot, we do not have the confidence to talk about those types of themes with him, which I now know about since, Thanks to God, people have come here, like you for example, that come here and give health talks here, so if with my friends, also that we are able to talk exactly like this also.

**In:** And you have received information?

**Re:** Yes, in the high school.

**Paola:** I was taught about it in the street because I have a family but my Aunt now is a little old and does not talk about this and my Aunt… the only thing that was said to me was to be careful to not become pregnant.

Fostering children brings certain difficulties to HIV/AIDS prevention when it comes to prevention education. The Garifuna in the past lacked a certain level of comfort in talking about sexuality. Now, children are being raised in households with extended families who do not know if they have the right to talk with the children about sexuality, let alone have the comfort level needed to talk to them. This is especially true if there is a generational gap—many grandparents
are fostering children of parents who have emigrated in the pursuit of resources. This subject of foster care came up in an interview with multiple development agencies:

Development Worker:
So this is where there is a difference, in the Garifuna population, if there are barriers also as far as the power that the parents or the people that are in charge of the children because many times they do not live with their parents, they live with some relative because their parents have emigrated to also offer something better to them also, okay. There are those situations of which they can not ask their grandmother, they can not ask their godmother or my uncle on things like sexual relationships. It is better for them to question their neighbor, to their friend in school and they do not have the knowledge and they are going to offer them erroneous information and on that they are going to make erroneous decisions. Because they do not have the knowledge to have a sexual relationship and now later when they have the consequences, they are saying to me, if I had known, is now where there is a difference.

Development Worker:
It is not important to have gone away and there is like no support for their children and also because many, as I have said, many are in the hands of their grandparents. Now, she is already tired, she raised 8 children, now they have 5 more. And now they do not want to know more, but the grandmother relaxes well when the grandchildren go. So this is a complex situation.

Even though there are still some pockets of resistance to sex education in schools and discomfort in talking about sexuality in general; overall the comfort level and ability to talk about sexuality are increasing in the Garifuna population, especially the youth population. This subject came up repeatedly, that there was an increasing level of comfort in talking about sex with not just their siblings and friends, but parents as well.

**Same Gender Comfort Values**

Females in the focus groups prefer to talk to the same gender when it comes to learning about sexuality and almost always to someone older. When listing people whom they trusted to talk to about HIV/AIDS and sexual information, the female focus groups all listed specific friends and family who were of the same sex (aunts, mothers, female cousins, girlfriends.)
The male groups tended to mention friends “in the street” and other informal places as their source of information. However, some of the male groups did talk about mothers and aunts as a source of their sexual education, which could be because of the massive amount of single mothers in the town, due to the large percentage of men who immigrate for work—such absences, limit a boy’s access to male role models.

There also seems to be a feeling that the person, regardless of sex, must have a certain level of general trust before they feel confident interacting about a very personal topic such as sex. This can be seen in this female focus group response.

Paloma: I would not talk with people I do not know, nor would I talk with people that do not know and understand me already. And they are supposed to give me good advice?

The distrust of outsiders may come from personal history, but there is a good chance this could be manifested from the segregation that Garifuna communities have suffered through time by other Hondurans. Outsiders who come into the Garifuna community to talk about sexual situations, which is a subject of great discomfort to many Garifuna, could be a detriment to the Garifuna’s learning about HIV/AIDS.

Friends

The advantage of friends over family is that not only do the individuals have rapport and trust with a friend, but barriers such as age differences, family power dynamics, and discomfort levels can be different from those that they have in their family. This is probably why a large percentage of both female and male Garifuna focus groups in this study cited friends as a source of HIV/AIDS knowledge, as seen from this male focus group respondent:

David: With my friends always, we meet when we talk about this for two hours to five hours we sit there talking. For example, when we end here, we are going to talk about these questions, here like we want between all of us, so we can talk about this, so each can compare their experience and we can learn to be better people.
The interesting thing about this quote is that it does not seem that this group of friends is necessarily using their friends as the source of information, but it is a way for them to process the information. The friends seem to be taking this information and internalizing it by comparing their own experiences to another’s and the information that was given. Among these Garifuna focus group members, a process of self-actualization and support appears to be going on with this circle of friends.

Focus groups have acknowledged that when it comes to new information, they have changed from going to their family for information to going to their friends. This is because the family members may be out of the current information loop, while their friends may be in the know on the information they are seeking, as seen in this female focus group response:

Gloria: My mother taught me about things, but she didn’t know anything about AIDS, so she couldn’t. I had to learn about this from my friends; that is how we have become accustomed to learn.

Many older family members who are out of school do not have the access to the current information on HIV/AIDS and therefore cannot help. In this focus group’s town they now look to their friends for information to supplement older family members who may not be in the know.

**Schools**

Schools are looked upon by the community as the seat of knowledge, so it comes as no surprise that some of the focus groups would mention the local school as a good source of information about HIV/AIDS. Many of the schools have incorporated HIV/AIDS information into their curriculum; they already have established trust with not only their pupils, but many in the surrounding community. Students can feel free to ask specific questions on things that their family members may not be able to answer, as seen in this male focus group response,
Ricardo: In the school there are books about sexual education. In the school we learn about sexual relations. First we learn in the house what is a sexual relationship, if we are going to talk about sexual relationships with a boy we are going to talk according to the age that the boy has, so in primary school in the house, but now in the school they are going to have some orientation. The parents are going to touch a lot on the subject of sexuality. Now, the schools are going to touch on about the sexually transmitted diseases, like HIV/AIDS and all of these sicknesses. The teachers see the students in the classroom and make them conscious of it. It was in the school where I learned a lot. When I went to high school I learned more because they always touched on the subject on sexual relations.

Tomas: The presentation that was given us in high school, I was interested in the presentation that was made and I believe that it took hold of me.

From this focus group response, it is clear that the primary talks on sex and dating come from the family, but when the student wants to know specifics about sex and HIV/AIDS, the school seems to be the source they trust. The school was selected by some of the focus groups as a good source because it not only offers sex education, but it allows the students to participate in the learning process to some capacity. Keeping Garifuna youth active and engaged in the learning process has been a concern among some of the development agencies.

Health Centers

Health centers are well-established community centers within Garifuna communities—many have Garifuna medical staff. This rapport, coupled with the trained staff and educational materials, is perceived well by the Garifuna community. This can be seen through these male Garifuna focus group responses:

In: If you have questions about AIDS and you do not have the answer, where are you going to go for this information?
Paco: I go to the health center because they know more about these things.
In: And you also go to the health center or where else do you go?
Paco: Yes, with the doctor also.

Kike: When it comes to sexual relationships I have heard from all sides. In health talks, in the health center, people who talk at meetings. I always learn a little more from other sources.
The respondents look at the health center as a nexus of knowledge where not only the doctor or nurse are sources, but a conglomeration of sources come together. This allows the focus group member to fill in gaps in their knowledge from many sources and, to some degree, probably compare and question them.

**NGOs/Health Talks**

With the Honduran HIV/AIDS prevention plan concentrating all of the prevention on the Non-Government Organizations (NGOs) and development agencies, it would come as a surprise if no one in the focus groups listed NGOs as a good source of information. NGOs have a variety of ways of achieving the transfer of HIV/AIDS knowledge, utilizing health fairs, peer education, hiring community health educators, social marketing schemes, among many other ways. When people list NGOs as a good source of information, it is not clear which of these strategies they are referring to.

One of the other points that is not understood is the relationship of the NGO to the community. Some of the NGOs are local Garifuna-run NGOs, while others are run by Latinos who only visit the community occasionally. Having a locally run NGO allows the individual to have follow-up sessions and brings a feeling of rapport with the educator, as seen in this female focus group response:

Maria: When I first learned [about HIV/AIDS], it was with (a local Garifuna NGO). Now after I was invited to a meeting and the big truth is that I did not have the whole story. There were many things that I did not know and when the meeting ended I now know that when they finished that there are still many things I don’t know, but I know the most of it. The other organizations only talk about one of the methods of prevention and of transmission and nothing more. So they talk deeper about what HIV/AIDS is.

This woman notes the need for multiple HIV/AIDS education sessions to relay all the information on HIV/AIDS. Many people find it hard to go to one health talk and walk away with
the needed information to make drastic life changes. It often takes multiple reiterations of the same information and the gathering of new information during each session to totally understand the problem and its solutions. There may be a feedback loop during these sessions, where information that is not being understood initially is being answered through reiteration of the answer and explaining the fact to the individual in different ways through questions and answers.

For focus group participants, friends and family are still by far the most likely to share what they’ve learned about sex, but public sectors also are a growing source of information. Six focus groups listed schools as a place where they learned about sex, while eight listed NGO formal talks.

Focus group members do not feel comfortable talking about the theme of sex with their sexual partners. This discomfort is perceived to be especially true with the males participating in the focus groups:

In: And with the girlfriend, you haven’t talked with her?
Felipe: About this? Between us, I am not going to talk with her.
In: Who can you not talk to about the sexual relationships?
Raul: With the “Chicks”

Overall, it seems that the focus groups and development agencies alike believe that the Garifuna are getting more confident and comfortable talking about sex and sexuality themes. However, there is still discomfort in talking to parents and members of the opposite sex. Perhaps these areas of discomfort can be served by mass communication.

Mass Communication

Mass media can reach many people cost-effectively. Mass media can also be tailored to be both educational and entertaining. It also has the added advantage of allowing the Garifuna to privately get information, which is important since many Garifuna have a difficult time talking about sexually themed topics.
Theater

A project has been initiated by a NGO for a Garifuna theater group to travel to different Garifuna communities to entertain and educate their audience members on HIV/AIDS. Garifuna community members were selected to be taught about HIV/AIDS. Then they were taught from professional script writers and actors how to write, perform and produce their own theater production centering on HIV/AIDS prevention. Therefore, inherently this program created a core group of potential peer educators within the community. For many Garifuna who had connection with the theater production, there was still much fanfare and excitement attached to this production. Some of the focus group members were even a part of past productions and those members displayed a good understanding of HIV/AIDS information.

Others who watched the production had mixed reactions to it. They felt the play was a good source of information; however, it also attracted a lot of people from the community who were noisy and detracted from the learning experience. As seen from these female, then male, responses.

Berta: Sometimes the plays, but sometimes when maybe we have these plays, there are people that make a lot of noise and maybe, maybe one wants to pay attention to them, but the noise that the person makes disturbs you, but yes the information that (Garifuna NGO) that they have brought us has served us well.

Carmen: When I went to the meetings about the theater and they expressed to the world a person can coexist with HIV and how we can prevent it. It was wonderful the way that he explained to the people how to prevent it and how a person can live with it. They (give you the) ability to live with a person in the house that has a relative with it because they know what they can do with this person.

Another added bonus to the theater presentation is that the people who participate often became knowledgeable enough about HIV/AIDS information to become a peer educator in the community. Some focus group members have watched the theater production and seen friends in
it whom they have later asked questions about HIV/AIDS, as seen in this response by a male focus group member:

Miguel: I always ask each time that I am go to a group there and question what I do not know. I have a friend that does dramas about it (HIV/AIDS) and I always ask him about things that I do not understand, so I ask him.

These quotes tell us a plethora of things. If the theater group does not inform the individual with the drama itself, it creates a trained cohort of peer educators in the process. Putting these people in the theater group not only allows them to relay information during the dramas, but it advertises to the community who is a credible source of HIV/AIDS information.

The downside of theater groups is that it seems that the audience does not always pay attention to the theater production and can cause disruption. A disruptive audience can cause a person to obtain incomplete information or maybe in some extreme cases, incorrect information.

Radio

When the Garifuna focus groups talk about radio as a good source of information, it must be noted that radio can mean many different things, both as commercials and as a radio drama. When the Garifuna focus groups are talking about the radio as their good source of HIV/AIDS information, they are mostly referring to the drama that was produced by an NGO.

The idea behind the program was to take a number of Garifuna youth from multiple communities and educate them about HIV/AIDS, and then give them lessons in drama and have them develop and implement their own radio drama built on the subject of HIV/AIDS. This program has been running for a number of years and is in its second production cycle.

The NGO that decided on this medium did so because prior assessments showed that of all the mass media sources they could choose from, Garifuna have the most access to radios and
seem to utilize them above all others. This NGO has striven for this program to have nearly one-
hundred percent coverage to the Garifuna community, having recorded the program in Spanish 
and Garifuna so all generations of Garifuna can listen. They have even supplied Garifuna 
communities without access to electricity, with battery-run tape players so they can listen to it.

Having this type of coverage, it is no surprise that some of the focus group members have 
listed it as a good source of information. This can be seen by this female focus group response:

Delores: On the radio. We have had many health talks, but I listened to it on the 
radio here. I like the radio program here and it repeats the themes every 
day or so. They have a guy that is infected and he is with another 
woman. Each woman likes it. And they talk about morality, so I think 
this is the best.

Focus group members mention that the radio dramas repeat the same themes on 
HIV/AIDS. This is important for retention and filling in information gaps that may have been 
missed before. The other subject touched upon is the fact that the dramas bring sexual themes out 
into the open and seem to give the listeners a higher comfort value in discussing sexual subjects.

Summary

In focus groups the Garifuna report that HIV/AIDS information must be received by a 
source that they have grown to trust and with which they feel comfortable. Both mass media and 
direct contact sources seem to fulfill this capacity in different ways. Direct contact sources tend 
to be friends, family, and accepted community leaders, such as health professionals, teachers, 
and community health leaders. People who are perceived as good sources have built up a 
reputation of trust and history in the community. NGOs also seem to fit this niche since many of 
them are Garifuna and have a strong reputation in the communities.

Mass media allows people to access the information on their own and in private, thus 
circumventing possible embarrassing situations of talking to family members or others about sex.
Also, through radio dramas and theater groups, mass media is entertaining and does not just through information at people, but keeps them captivated through stories. Mass media also enables the listener/viewer to gain a basic idea or understanding of HIV/AIDS, to which they complete the feedback loop of information by talking to others in their circle of friends about this information to clear this information up or fill in missing gaps. Thus mass media acts as the initial source of information or awareness, which is often reinforced by face-to-face interaction with people within their social network.

Another theme is the fact that many of the focus groups report receiving their information from multiple sources. They seem to take information from many sources and fill in the gaps or clear up confusing information from different sources to achieve fuller comprehension of HIV/AIDS or to validate information that they may not trust.

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Chapter 10

Teaching Change: HIV/AIDS Education, Risk Perception and Behavior Change

For more than a decade development agencies have invested in programs to prevent and lessen the impact of HIV/AIDS within the Garifuna community. These programs have been extensive and thorough, utilizing mass media campaigns, educational curricula within the school system, community health educators, and peer education. All of these programs are intended to raise awareness, increase knowledge, change attitudes, and ultimately behavior change. Looking deeper into attitude change, specifically the impact that the programs intend to have with the Garifuna attitude is to instill within each individual a sense of personal risk to HIV/AIDS, to curb and stop risk behavior pertaining to contracting HIV/AIDS.

This section investigates the perceptions of the Garifuna to their personal risk of contracting HIV/AIDS. Also explored is how risk perceptions translate into behavior change that could reduce the spread of HIV/AIDS. Finally, this section investigates how the Garifuna are changing their risk behaviors to either the recommended ABC behavior change or, if not, to other behavior they believe will reduce their risk of contracting HIV/AIDS.

Perceived Risk of Garifuna

In the focus groups, many of the people who say they are at risk explain this risk as fate. Such examples include:

“(The risk of people) are at the same level.”
“Everyone is at risk for it, so that is why we need to take precautions to avoid the infection.”
“While we are alive, we are prone to receive the HIV infection.”
“Everyone (is at risk). There isn’t any exceptions. It can be white, black, young, old.”
The inability to attach HIV/AIDS risk to the corresponding risk behavior suggests that they have not made it to the next stage of understanding to enable behavior change.

Understanding and retention of factual knowledge does not necessarily mean a deeper knowledge and understanding of HIV/AIDS and the risk they have. Often when the members of the focus groups answered the question of whether they were at risk or not, they answered with the proscribed recitation of factual knowledge that they have been given, and not necessarily the reflective, deep understanding of the context needed to make behavior change that would be against the normative behavior of their community.

The Garifuna in the focus groups that did have specific answers as to why they perceive themselves as being at risk for HIV/AIDS either listed their distrust that their partner is being faithful or an increased awareness through direct knowledge of someone that is HIV positive.

**Perceptions of Males as a Risk**

Questions of partner’s fidelity runs especially rampant through female focus groups as seen in the response of these female focus groups:

**Fortunata:** I don’t mess around with other people, but when you mess around with other people you never know. When I have sex with my husband, I use a condom, because you never know if my husband has another (partner) behind my back. It is probable that he has another behind my back. You run the risk when you have a partner that has sex with another person. You don’t know with whom they have done or about the other person, okay? And until we do, maybe know about the others, there is a bigger risk. So it is better to maintain the use of condoms.

Women distrust their partner’s fidelity for multiple reasons. Garifuna respond that it is in the man’s nature to want to have multiple partners. They view the male sex drive as a natural urge, like hunger or thirst, and females may not be available to quench this urge, or males need variety. This urge is often seen as uncontrollable, so when men have sex, they can not be held
responsible. Responses from this study show that men look at multiple partner acquisition as something to be celebrated, and women hold a, “boys will be boys” attitude to the whole situation. Past research with other Latino and African men concur with this perception of multiple partner acquisition as a male prerogative (Burgos and Diaz-Perez 1986).

The Garifuna culture gives credibility to the women’s perceptions of men as a risk. Garifuna men have a history of having multiple wives or long-term partners. If it was socially acceptable to have many partners in the past, even if they no longer have this practice, males will still believe that it is socially acceptable to take on more partners.

Finally, with the Garifuna having a long history in immigration to other countries and the larger cities in Honduras in search of economic resources, many in the past have taken up with other partners while away from home. With women being unable to know what men are doing away from them and knowing that men often have other partners, women’s distrust of men is understood.

**Learning through others**

Another category of people who have greater perceptions of risk are those who have been made aware of HIV/AIDS by encountering or knowing someone who is HIV positive. Since the Garifuna come from a small community environment, many times these HIV positive people are relatives or close friends, which heightens the personal attachment to the problem, as seen in this interview:

Eva: Yes, I have a cousin that has AIDS, so I know that everyone has the risk of being infected. There is always the possibility of a person dying of this, a person that is normal, a person like me, because I am here. Because I don’t know, maybe I will go with a person here or a person there and maybe they are infected. (laughing). I just don’t know. Or maybe they do not know that they are infected and they just don’t have the results yet. Maybe they are just afraid of the results. You don’t know. Maybe they are afraid of what the results might say.
Having a member in their family contract HIV makes a person better able to contextualize the information and gives the individual a direct understanding as to the consequences and possibility of being infected. The ability to put a name and face to the possibility can be an important link in gaining concrete understanding of being at risk and a reason to change behavior to reduce this risk.

The Belief in Purposeful HIV Infection

Many people in the focus groups have replied that they have heard of people who have been diagnosed as being HIV positive who purposively have had unprotected sex with people to infect them. One of the reasons given for deliberate infection is the belief that sex is an uncontrollable urge. Even though the person is conscious of being HIV positive and knows that they could infect others through unprotected sex, they just can not control themselves.

Domingo: “Sometimes they already know that they have it, but they have it bad for the other person, like they always are saying that.”

Other respondents have another take on deliberate HIV infection. They believe that because of the lack of a cure for HIV/AIDS, many of the deliberate infections stem from a fear of dying alone. Because of the discrimination and fear that surround people who are HIV positive in a Garifuna community, they have in the past been heavily segregated. Now they deliberately infect people to be with them as their health transitions into death.

Consuela: “Okay, I knew a girl with this disease. I heard it from her mouth and I listened to her and to her story and I learned that she was with this disease and she said that she is not going to go alone.”

The final reason why people who are HIV positive deliberately infect others is for revenge. They vilify people with HIV to the point that they take on the persona of a “pariah” status in the community. Some of this animosity can be seen in this focus group reply:
Roberto: In the community they always say that now that I am infected I am going to take two or three with me.

These rumors have their roots in the past, where discrimination, community isolation and lack of information on what and how HIV/AIDS is spread, bred rumors to fill in these gaps in information. In many ways, rumors encouraged the spread of HIV by isolating people into silence or self-denial about their HIV status. Rumors pushed people into continuing with their sexual behavior to put on the façade that everything was normal. Rumors also have had the negative effect of passing incorrect information about HIV/AIDS to people who could have benefited from positive behavior change instead of some drifting to supernatural explanations for the infection.

People Who Perceive Themselves as Not Being at Risk: Knowing Their ABCs

People who do not perceive themselves to be at risk for HIV/AIDS infection think they understand all the avenues of HIV/AIDS infection, so they are not at risk. Their reasoning shows that they have a good understanding of how they can be infected by HIV/AIDS and that they can call upon that knowledge to adhere to the ABCs to keep themselves risk free. Others adhere to the ABCs by calling on their religion to make themselves risk free. Those who do not perceive themselves at risk, tend to talk more about abstinence, delaying sexual debut, and condom use rather than fidelity.

HIV/AIDS Education: Lowering Risk Perception through Understanding

Abstinence

The practice of abstinence, including delaying sexual initiation or secondary abstinence (not having sex again until a certain time in their life determined by the individual, such as graduation or marriage), is a reason that many Garifuna feel that they are not at risk for HIV
infection. Abstinence has been the focus of many of the HIV/AIDS educational programs, especially those offered by some religious-based agencies that have an abstinence only sexual education emphasis.

In: And you are you at risk?
Cristian: No.
In: Why not?
Cristian: Because I am against fornication, I am religious and not just any religion, I am Christian, and in Christianity, God prohibits fornication and I am not married, so I am not at risk of being infected.

Many who answered that they were not at risk because of abstinence pointed to strong religious background as to the reasoning why they are not sexually active. The other reason that many proclaimed abstinence is the desire to further their education. In their view getting pregnant or contracting HIV/AIDS would not allow them to achieve their goal of graduation.

Condom Use

The vast majority of the focus group respondents that claimed they were not at risk for HIV/AIDS claimed this lack of risk because they used condoms with their sexual partner(s).

In: Do you have the risk of being infected?
Carlos: At the moment, no. We can use condoms.

Development agencies that have been working with the Garifuna communities on HIV/AIDS prevention have been trying to promote the use of condoms. Many people perceive condoms as being infallible, and if they use condoms, then they can have the lifestyle that they want without having to sacrifice through behavior changes. However, there seems to be inconsistency in their responses to using condoms.

Esteban: I always have a condom in my pocket.
In: So you always have one in your pocket?
Esteban: Well, I don’t always, but I bring one if there is an emergency.

In: Do you use condoms?
Domingo: I always do, although my first time I forgot to.
In: Do you use condoms?
Domingo: Yes, I have one always, in case of an emergency. But now I do not have one because I am going to play basketball and also I don’t have a romantic date with anyone, right?

Many believe they need to have a condom in case of an “emergency,” which reinforces the belief that sex for many males is an uncontrollable urge that cannot be stopped. Many younger men in these focus groups believe that they need to keep a condom on themselves in case they run into a willing female. Their prior knowledge of HIV/AIDS makes them risk adverse to unprotected sex, but does not stop them from having sex.

The 2006 COMCAVI survey of Garifuna youth show that 50% of male Garifunas and 43% of female Garifunas report using condoms on their last sexual encounter. This increases to 57% for males who have occasional partners. This shows inconsistent condom use, and from responses of focus group members, it seems that using condoms with long term partners does not seem a practical solution. To many, using condoms becomes a question of their fidelity to their partner or a lack of trust in them.

Understanding Risk

In the survey given to the focus group attendants, slightly fewer than 20% of males and 63% of females believe that they are at risk for HIV/AIDS. Not until one delves deeper into the context of the question can one get a better understanding of it.

In: Do you believe that you are at risk of being infected with HIV?
Alfonso: No. If we are intelligent, we do not have a risk. Nobody is prone to it.
Gabriel: At least, if we are intelligent, and we use our intelligence perfectly, we are going to know how to make it in life.

From the focus group answers about why they do not feel at risk, men note their knowledge of the ABCs, while women reply more with fatalistic answers such as “one never
knows.” This could be because of gender power dynamics; many Garifuna women do not have the capability to ask men to wear condoms. Furthermore, they do not trust men to be faithful. Thus, because of these gendered power dynamics, women feel that the possibility of HIV/AIDS infection is not within their power to control.

Many males do not feel at risk because they feel that they can prevent HIV/AIDS infection without changing their behavior. Development organizations are proud of their contribution to the Garifunas greatly increased awareness and knowledge of HIV/AIDS. However, they are also distraught that education has not led to behavior change, as seen from these interviews.

**Development Organization Worker**: An interesting thing to the learning experience for us, is that they may say yes, but they don’t mean yes, not necessarily …when you are educating them with condoms, they will say yes, but will they have a condom on hand when they did it? They don’t. They don’t use it. Once again it is not a matter of education; it is a matter of behavior change.

**Development Organization Worker**: The surveys have shown cases where the people know what the problem is, but following people at risk and their relationships, they are not protecting themselves.

The Garifunas see the problem with the normative behavior around sex diminishing. Garifuna also see their knowledge awareness going up, but behavior staying the same, as seen in these focus group interviews.

**Fidel**: There are less people that do not have the information about AIDS, …but of the (sexual) practice, it does stop or the number does not decrease, nor the method (of infection). They do not take hold of the practices; they do not practice what they hear. I do not see the change.

Even though the COMCAVI surveys seem to show that the Garifuna are not following the prescribed behavior changes of the ABCs of HIV/AIDS prevention, this does not mean that the Garifuna are not changing their behavior relating to sex. According to the focus groups,
behavior is changing, but not in the way the development agencies are pushing. Simply put, the Garifuna males do see the risk of HIV/AIDS, but they do not want to be abstinent, nor have only one partner, nor use condoms, so they are trying to reduce their risks in different ways, as will be seen.

Behavior Change

It has been well noted in the literature that there has been a lag in behavior change when applying behavior change models. Behavior change models do very well at bringing about awareness of the problem and increasing knowledge about the problem. However, there seems to be a disconnect between making people perceive themselves more at risk, and actually changing their behavioral practices, which has been colorfully phrased in the literature as the KAP (Knowledge, Attitude, and Practice) gap.

This study shows that individuals are changing behavior; however many are not following the proscribed ABC behavior that the development agencies would like the individuals to follow. Many Garifuna have developed strategies to reduce their risk of contracting HIV/AIDS, but not through the ABCs.

Some focus group respondents say they are following the ABCs, but for many their behavior change revolves around being more cautious about taking on partners too quickly, by assessing people on their looks and reputations before sex. They also have started being more cautious around certain segments of the population that they see as more at risk than others, such as immigrants. Finally, the family members have started using moral pressure to get their younger family members to follow safer sexual practices—this pressure is indicated in, for example, parents making judgments on future partners and using shaming to curb dangerous sexual behavior.
New Spin on an Old Behavior: Sexual Reconnaissance

The Garifuna are now inquiring about the sexual history of potential partners to calculate their potential risk. This “sexual reconnaissance” on potential sexual partners is to determine their risk factors for HIV/AIDS. For women, who know once they are in a relationship they will not have the ability to negotiate condom use or enforce fidelity, it is necessary to know as much information about their potential partner before the relationship to curtail possible HIV/AIDS infection. Males want to know more about potential sexual partners to reduce their HIV/AIDS risk without having to follow the ABCs.

Information that they want to know about potential partners is their sexual history, or how many partners they have had, or if their past partners were a risk for HIV/AIDS. This information can be gathered directly from the partner, but it often comes from circuitous means, such as family members and friends who may know this person.

The questions that the Garifuna cannot gather from their social network are asked directly, such as their potential partner’s personal health practices, including use of condoms, and if they know their HIV status through testing. Some of these questions can be seen in the following examples:

Females

Number of Partners
In: What questions do you have for the person with who you are going to have a date?
Margarita: If he uses protection, what protection does he use?
Perla: If he has relationships with others, if he has some infection.
Marta: Like what he did with his girlfriend, if he brought her to bed or what he did with her, or if he did this or that. Then I will say that I use condoms because the men do not have that there is talk bad about women because they talk about what they have done with women.
Sofia: How many women that he has had, because now there are guys that have had a lot of girls.
Condom Use

In: What questions to the person with you are going to have a date?
Carmen: If he uses protection, what protection does he use?
Berta: If he has relationships with others, if he has some infection.

Testing/HIV Status

Amparo: The first question that I want to ask my boyfriend that to get a blood test, to know if he is sick or not.

Males

Number of Partners

In: And you, what information do you want to ask the girl when you date?
Geraldo: With how many have you been with? Or there are times when the woman questions this to me.

Condom Use

Cristobal: Okay, First, I want to know information about her, if she has “done it,” if she is older in age, I ask, if she has done it, or if she has not “done it.”
In: What is she has “done it,” what if she has had a sexual relation, what questions now?
Cristobal: If she says so, I think on it, to do the things well and always use a condom.

Testing/HIV Status

Carlos: When I go to a Garifuna community and I encounter her, I say “Hello” to a woman. I first have to question, if I have friends there, I am going to say “How are you?” You know, if they say, that this girl has AIDS, I am going to start to get away from her, although I cannot go because of only what the people say, because maybe she does not have it and they are saying that she has it, because of this I have to ask.

Whom They Slept With

Donato: Maybe if this person has had a (sexual) relation. I want to talk to another person, because also I want to know everything that they are not infected. I don’t want to take any chances for anything,
Males and the females both are interested in the same type of information, with the exception that males also want to know specifically with whom the women slept. Sexual reconnaissance is not only a way of protecting oneself from potentially dangerous partnerships, but for many it is a way of reducing risk without having to follow the ABCs of HIV/AIDS.

As with Garifuna males, research has shown that males in Malawi also are trying to be more selective of their sexual partners to reduce their risk of HIV/AIDS, without changing their sexual habits. Malawian men were using biographical and personal characteristics as criteria for choosing sexual partners (Kaler 2004). Kaler found that Malawian men were choosing women that they perceive as being less likely to carry HIV/AIDS using “social status, age, personality, those having a history of refusing sex to other men, and educated school girls” to reduce their chances of HIV/AIDS infection, as well as becoming “born again” to resist the temptation of women.

Judgments on Wasting

Reputations are not the only thing that the Garifuna are using to make risk assessments. They also know enough about the cycle of the HIV/AIDS virus to understand that in the latter stages of the disease, many of the victims go through “wasting” or rapid weight loss. This later stage in the HIV/AIDS disease cycle makes many fearful of people who are too skinny or have lost a lot of weight recently. This can be seen in these comments by these male Garifunas.

Benito: There is a belief when you see a person that is becoming skinny that he is decaying. The first thing I am going to do is think that they have HIV/AIDS.
Esteban: Okay, if we see a broom with a skirt, it is bad if you do not use a condom with this person as we say.

Judging people by their weight shows that the Garifuna have begun to understand how some people might be riskier than others as sexual partners. People that are skinny are being
judged as potential carriers of HIV/AIDS and without further information on their background, their potential as a sexual partner falls. Although this system is far from perfect, they perceive it as lowering their chances of contracting HIV/AIDS. This information shows that the Garifuna are sometimes only receiving partial information and that they are using this information to make decisions concerning HIV/AIDS prevention.

**Family Factors of Protection**

Not all decisions about behavior are made individually. For the Garifuna, family tends to be very tightly knit units that often make decisions for younger family members, such as with whom they are allowed to associate, where they are allowed to go, and what they are allowed to do. In Garifuna communities this goes beyond the immediate family, especially in a community where many of the neighbors are related in some way. Some focus group members talk about this community screening and how family and neighbors look out for them. As these male focus group replies show.

Fortunato: (When someone dies of AIDS) There will be a radical change in this family, because if one went this way, they are not going to want another one to go that way. So always between families they monitor this. ‘And what will happen if you sleep with someone there? What are you going to do there? With whom are you going to be with?’ they say. This is not good for you; you do not know what is going to happen there or also since you do not have information with this person, with how they have lived. With who she has been with, how is she, what has she done with her life, you understand me? Thus also others in the neighbors are going to question, ‘And do they have AIDS? Do you have proof?’ Here are many that do this, so always that a person dies of this in a family, always there is a radical change in the family. You are going to see more of a union in the family because they do not want another to go or two or three more have the same problem.

Families looking out for their family members work in multiple ways. The members look out for the individual, but also the individual carries the guilt of what would happen to their family should they contract HIV/AIDS. The shame and possible discrimination for ones’ family
can make individuals reflect on the repercussions of an HIV/AIDS infection, as can be seen in these male Garifuna focus group replies.

Elvira: Yes, there are changes in the family. (The Family) becomes aware of things and they have come to a realization, because as I said before, when one gets it, it doesn’t just affect the person living with HIV, but to the family also. Because the family is worried that they will say there that to have a relative living with HIV is a shame to the family and all of this. Then the person begins to have a change, we can almost say that it is radical, thus it is an extraordinary change and to not say this, I am not going to fall into that, the family is changing.

Garifuna are also realizing the possible financial impact they would have on their family. They understand that if they are sick, they no longer can hold a job. They are aware of the loss of time and money the family members take on with a person sick with HIV/AIDS, as well as the direct medical costs. This is seen in this male focus group response.

Eligio: My opinion is that one in the family does not want a brother or a sister to have HIV/AIDS because in the first place it is not a death that is going to last a few days, but it lasts a long time, for years in a bed and it is totally the cost of the family.

Summary

Individual-level behavioral models are based on the premise that individuals can be encouraged through levels of awareness, knowledge, attitudinal, and then behavioral change. Program interventions influence individuals to make these rational changes in stages until the end goal, reduction of risky behavior, is achieved. However, this linear approach does not necessarily happen. From this study we find that Garifuna are aware of HIV/AIDS, the risks it portends to them, and they have the knowledge they need to enact on behavior changes needed to prevent HIV/AIDS transmission

In theoretical prevention models, without the individuals believing they are at risk, they will not adopt the behaviors that will decrease their risky sexual behavior that drives HIV/AIDS
infection. However, these surveys do not provide sufficient context for understanding risk. When delving deeper in the reasoning behind the Garifuna who say they are not at risk for HIV/AIDS, they provide proof that they have obtained knowledge of HIV/AIDS. If the person is abstinent, or has sex with only one partner, or uses condoms, why should they feel at risk for HIV infection? On the contrary, the people who perceive themselves at risk for HIV infection tend to use fatalistic reasoning, which does not show any evidence that they have conceptualized any understanding of why they should feel at risk. People who respond on a universalistic theme that “One never knows” do not show any concrete reasoning as to why they feel high at risk.

As Martina Morris is famously quoted as saying, “Sex doesn’t cause AIDS. Partners do” (Morris and Kretzschmar 1997). People who have a universal fear of HIV/AIDS do not understand that HIV/AIDS is a behaviorally driven disease. Some in this study tried to push the possibility of HIV/AIDS infection on to acts that infect a very small percentage of individuals, such as iatrogenic infections in hospitals. In doing so they do not show that they understand that it is the behavior of unprotected sex that is driving this disease in Honduras.

However, one must look no further than the behavior of the Garifuna to see that they have some concept of HIV/AIDS risk. Why would they change their behavior if they did not see any risk? Many Garifuna are not following the ABCs of behavior change as offered by the development agencies. However, when looking at the responses of the focus groups, one notes that they are changing their behavior in a manner that they believe reduces their risk of contracting HIV/AIDS without having to change their sexual behavior to the ABCs. Garifuna are now relying on sexual reconnaissance to find out more about potential sexual partners. If the person does not have prior history and knowledge with a potential partner, they are going to
friends, family, and the potential partner themselves to find out more about the partner’ past and their HIV/AIDS risk.

The Garifuna have also changed their perceptions of returning immigrants from the U.S. Before many Garifuna women looked at the returning male Garifuna from the U.S. as a potential partner, not only because of their access to dearly needed economics, but for some the hopes of going to the U.S. for their chance to access more income and to further their education. Although, these immigrants were favored as potential partners for Garifuna women in the past, now many Garifuna women avoid them because they do not know of their sexual past and cannot assess their risk as a partner. These immigrants are now looked upon as a risk for HIV/AIDS and many of these immigrants are thought of as the harbingers of HIV/AIDS to their communities in the first place.

Reducing risk of potential partners relies not only on sexual reconnaissance, but sometimes on direct judgments of prospective partners as a potential risk. Focus group members commented on skinny people as potential risk for contracting HIV/AIDS. The Garifuna are receiving insufficient information on the HIV/AIDS infection cycle. They know that in the last stages of AIDS often times the victim will lose an extreme amount of weight. However, this information is insufficient and incorrect in preventing them from contracting HIV/AIDS.

The Garifuna communities through their families are also changing to help younger members to avoid HIV/AIDS infection through screening their potential partners. Families are now asking more questions of younger members as to where they are going and with whom they are spending time. The community is also acting as a conduit of morality, letting individual know about people in their community who have HIV/AIDS so they can avoid them as potential
partners. This also works both ways; making individuals want to avoid bringing shame on their family, or be a financial strain should they become infected with HIV/AIDS.

However, some areas still lag behind in terms of protecting individuals from HIV/AIDS. Some families still believe that talking about sex encourages youth to engage in it. This rumor encourages families who are already uncomfortable talking about sex to not engage in any conversation about it.

With a high percentage of Garifuna youth being warded by extended family, guardians are using the excuse that it is not their place to talk to these children about sex and HIV/AIDS. For this reason, the needs of these children to receive information about sex and HIV/AIDS are not being met. Older extended parents also must face the fact that the world has changed since they raised their children, and so they need to re-learn and adapt to raise these children in a properly informed manner.
Chapter 11

Conclusions, Limitations, and Implications

This chapter identifies the main conclusions of this study, along with its research, theoretical, and policy implications. This chapter begins with a summary and discussion of these findings. Then some of the major research, theoretical and policy implications of the study are discussed.

Conclusions

The major questions posed at the beginning of this study are answered, but through the discourse of the study, new areas of enlightenment have been broached. The questions that this research wanted to understand better are:

1. How do demographic characteristics, attitudes towards sex, and the source of HIV/AIDS information affect sexual behaviors (abstinence, fidelity, and condom use) associated with HIV/AIDS transmission?

2. What type of HIV/AIDS information do Garifuna obtain and utilize through educational interventions from mass media and interpersonal social networks and how does it affect risky behavior to HIV/AIDS?

3. What are the perceptions from the development organization and the Garifuna as to the cause of high HIV/AIDS prevalence rates among the Garifuna?

Answering these questions involved analyzing multiple sources of information in a mixed-methodology approach. This research incorporated a country-wide representative survey through the 2005-2006 Honduran Demographic and Health Survey, in-depth interviews from development workers in Honduras, and focus groups with the Garifuna. Analysis of the 2005-2006 HDHS survey resulted in interesting findings from the Honduran female population. Findings show that education, regardless of prior knowledge of HIV/AIDS has a positive relationship with abstinence and fidelity, and HIV/AIDS information coming from personal
social networks have mixed positive and negative effects on abstinence and fidelity, while mass media has no significant affect on any HIV/AIDS behavior at all. Another interesting finding is the lack of significance in all HIV/AIDS risk behavior to women’s perceived ability to refuse sex, since policy has shifted into gender equality as a means to combat HIV/AIDS (Turman 2003). Finally, only condom use shows a significant positive behavior shift from having prior knowledge that condom use can prevent HIV/AIDS. In many ways, this is not surprising given the plethora of health education interventions through the years that have consistently not produced any significant change in ABC modeling behavior (Choi and Coates 1994; Gallant and Maticka-Tyndale 2004; Kaaya et al. 2002; Kirby et al. 2006; Klepp et al. 1994; Paul-Ebhohimhen et al. 2008). As many as three hundred HIV/AIDS educational interventions have been evaluated by the World Bank—it was found that none have led to any significant change in risky sexual behavior, conforming to the ABCs (Watkins 2009).

However, some variables showed possible potential for interventions to behavior uptake to the ABCs. Education has a large significant effect in keeping women abstinent, especially women who stay on to complete secondary level schooling. Women who want to complete their full educational potential will try to stave off sexual intercourse for fear of pregnancy that may force them to drop out of school to raise their child. In the case of younger women, having more family members in their house causes a “sentinel” effect. Having more family members in close proximity to the woman allows them to have vigilance in stopping sexual activity. Perhaps that can be understood via the many social norms in which women are expected to remain virtuous by keeping their virginity intact. By having more members in the household, they can be more vigilant about where these younger women are, and whom they are spending their spare time with.
According to the results of the HDHS, the social contract of marriage, whether formalized by the state or an informal “Union Libre” of cohabitation, is the biggest predictor of whether women will remain faithful. This potential policy is reinforced by Bongaarts’ (2007) research in Africa, where it was shown that married women have lower rates of HIV/AIDS infection than their single counterparts. Encouraging women to marry could be a policy pursued by the Hondurans. However, because this study does not have the input of Honduran males and fidelity is dependent on both partners being faithful, this variable needs more research.

Of the three HIV/AIDS risk behaviors, condom use is the only variable to show that HIV/AIDS prevention education has a positive significant effect on HIV/AIDS risk behavior. However, the variable of occupation also has significant effects. Perhaps this shows that women who achieve a middle-level occupation or higher, want to keep this occupation by avoiding HIV/AIDS, or unwanted pregnancies.

Although the focus group survey was not meant to give much more than descriptive statistics, some significant discoveries did result about risk perception. The focus group responses to their personal risk to HIV/AIDS, contextualized with a follow up open-ended question to learn why the Garifuna have this perception, show that having a better understanding of HIV/AIDS risk behavior causes risk perception to lower. In individualistic theoretical models to health behavior change, this would be seen as a problem since personal risk is seen as a necessary predecessor to reducing risky behavior (Ajzen and Fishbein 1980; Weinstein 1984). However, these focus groups showed that the increase in HIV/AIDS knowledge causes a decrease in personal risk perceptions. This is because those who know about the ABCs of HIV/AIDS, also know that if they do not exhibit this behavior, then they are not at risk for
HIV/AIDS. A mostly fatalistic view of HIV/AIDS causes Garifuna to perceive themselves as being at risk.

The qualitative information gathered from the in-depth interviews with development agencies and Garifuna focus groups helps answer three different questions. Namely, why do the Garifuna and development workers think that the HIV/AIDS prevalence rate is so high in comparison to the rest of the Honduran population? Where do the Garifuna regularly get their HIV/AIDS information that they trust? And how has their behavior changed since they became aware of HIV/AIDS being so prevalent in their communities?

From the vast amount of information analyzed, one realizes there is a divide in opinions about why prevalence is so high among the Garifuna. The development organizations believe that HIV/AIDS spread within the Garifuna communities because of their normative behaviors around sex, i.e., having multiple sexual partners, and early sexual debut without having consistent and correct condom use. Some Garifuna take umbrage to this perception and see it as a form of racism towards them. They do not see their sexual behavior as being any different from that of their Latino counterparts in Honduras. To the Garifuna, government racism led the Garifuna to not have access to the educational, medical and economic resources that would enable them to prevent and treat HIV/AIDS. The desperation of imposed poverty has led to immigration and prostitution in their communities—these, they feel, caused HIV/AIDS to soar in their community.

The Garifuna also believe that early sexual debut is a cause of the high HIV/AIDS prevalence. Further, it is a relatively new occurrence with their youth, caused by the outside influences of media, while drugs and alcohol act to disinhibit them sexually.
The response to the next question—where do the Garifuna receive their HIV/AIDS information and which is the best source—reveals that having face-to-face contact with the source of their information is important to them. This stems from the Garifuna’s need to have an established rapport and trust with their HIV/AIDS source of information. It is also important for females to receive their information from someone of the same gender. Males felt more comfortable talking to friends rather than family. There is a disconnect between children who are being fostered by a relative and whether or not the family member has the prerogative to communicate with them about sex. Adolescent children who are being fostered by relatives are not getting information on sex or HIV/AIDS from the relatives that they are living with, because the relatives believe it is the prerogative of the biological parents to tell their own children about sex.

The best sources of information according to the Garifuna revolve around NGO health talks and theater performances. This is probably due to the many NGOs that are staffed by Garifuna and have established offices in their communities. The other source of best information revolves around theater groups. This is less about theater performance than about being directly trained about HIV/AIDS information as a member of the theater group or having a friend or relative who was part of the theater group from whom they gathered their HIV/AIDS information.

The question of behavior change within the Garifuna community over the last five years due to HIV/AIDS shows that the Garifuna feel at risk for HIV/AIDS and have changed their behavior. However, this behavior change tends not to conform to the proscribed ABC reduced risk behavior that development organizations would like to see them practice. Instead, they are changing their behavior so that they can have multiple partners without using condoms, but still
reduce their risk of HIV/AIDS. The Garifuna strive to achieve this through sexual
reconnaissance—investigating their potential partners’ sexual background to ascertain vital
information that will reduce their HIV/AIDS risk. Information they seek in sexual
reconnaissance includes their number of partners, the risks taken by these partners, whether they
used condoms and if they have been tested for HIV/AIDS. The Garifuna have also become
reluctant to have returned Garifuna emigrants as sexual partners because of their history of
HIV/AIDS infection and inability to provide information on their behavior while in the United
States. The Garifuna have also utilized incorrect information on wasting as a way to physically
assess their partners for HIV/AIDS. If a potential partner seems too skinny or sickly, they are
assumed to have AIDS and are avoided as a potential sexual partner.

All of these conclusions have possible future implications for policy, research, and
theoretical considerations. The next part of this chapter elaborates on each of these areas, starting
with research implications.

**Limitation and Positive Implications**

In addition to the limitations listed in the quantitative and qualitative chapters, there are
also limitations to the mixed methodology utilized in this research. However, a positive approach
is offered in this section so that not only are study limitations described here, but the positive
implications that mixed-methodology has added to this research. Limitations include;
interconnectivity of the data set and the concentrated epidemic of the Garifuna, possible
misdirection of the quantitative data set, and time lags in the research steps.

Because the Honduras Demographic and Health Survey (HDHS) does not have any racial
or ethnic identifiers, it cannot be disaggregated to show the thoughts and behaviors of the
Garifuna. Also, because only women are interviewed, it does not represent men. Therefore, it can
only be used to determine predictors of HIV/AIDS behavior in the general female population of
Honduras. However, these regression analyses were critical in generating questions that otherwise would never have been contemplated by the author.

Since the HDHS can only determine predictors of Honduran women’s behavior, the questions generated by these analyses may lead the research into an area that does not speak to the Garifuna’s perceived behavior or interest. Demographic variables, educational campaigns, and women’s perceived ability to negotiate sex could affect the Garifuna differently than the general female population in Honduras. On the other hand, these analyses allowed me to generate open-ended questions that did not get to any degree of specificity. I also administered a small survey to the Garifuna focus groups to gain a better idea of their demographic background and responses to questions typical of the HDHS, to enable me to understand differences in the Garifuna focus group population and HDHS population. This understanding of their backgrounds offered insight into their history and background and thus into differing responses.

Responses to surveys depend on temporal considerations. People change through time, due to educational achievements, availability of information (in this case HIV/AIDS), and being at different points in their lives. Because the HDHS was gathered in 2005, the results from this data set may have generated questions in areas that no longer reflect the conditions that Hondurans are experiencing now. However, because my study was conducted in the summer of 2007, it is not believed that enough time has elapsed for information to invalid.

A mixed methods approach has many positive aspects, and was valuable in this study. Gathering new information and intrinsic knowledge of how the information was collected is critical in providing the best analysis of qualitative data. Direct contact with all in-depth interviews and male focus groups allowed me to ask critical questions to clarify points that were not clear to me. Collecting primary data also allowed my participants to steer the conversation
into areas that I could not have preconceived, uncovering normative behavior that had not been uncovered in previous research. This flexibility provided me with a better understanding of their perceptions of sexual norms and how they have changed with the introduction of HIV/AIDS into their community. Such things could never have been captured otherwise; further research is needed to understand if this perceived behavior and findings are representative of the Garifuna population.

**Research Implications**

This study has shown strengths of a mixed methodology as a form of triangulation and verification when dealing with sexual information. Because self-reporting data collection schemes have been subject to social desirability bias (Aral and Peterman 1996) and have shown inconsistent relationships among reported condom use, sexual activity, and STI incidence (Taha et al. 1996), mixed-methodology could be used to contextualize normative sexual behavior and its adaption to HIV/AIDS. Using focus groups to study sexually sensitive subjects makes participants feel more at ease by surrounding them with people of the same experiences. And more researchers believe that they should be utilized in studies of HIV/AIDS (Frith, 2000). Surveys also miss some of the contextual issues driving sexual attitudes and perceptions which could be discovered and elaborated on by qualitative means. According to the male focus groups and transcriptions of the female focus groups, everyone appeared to feel quite at ease in talking about sexual subject matter, especially if it was in the context of normative behavior in their community and not specifically about themselves. However, it was difficult at times to know the extent to which the male focus group’s responses were truthful or male bravado. Despite this, this research showed that qualitative research methods are a good medium for verification of self-reporting sexual behavior on surveys, a means to gather more information that could not
have been discovered via surveys and contextualization of sexual behavior. Furthermore, qualitative and quantitative methodology works well together in discovering new phenomena and then testing to see if this phenomenon is generalizable to the population.

More research needs to be done on contextualizing machismo in developing countries where males feel the need to pursue multiple sexual partners. Past gender studies in developing nations looking into fertility, economic and educational development often neglect males. Without an understanding of the power dynamics and normative hegemony males have over sexual decision making, HIV/AIDS educational interventions may be moot. This research would have benefited greatly from understanding the drive of males into acquiring more sexual partners and their dislike of condoms use. Future research should go beyond sexual norms and HIV/AIDS infection; rather, it should examine contextual information on pair bonding, partner selection and self-esteem to try to find out what motivates or acts as a barrier to behavior change.

It has been well documented that educational interventions do little to change HIV/AIDS risk behavior in the developing world to ABC proscribed behavior (Kirby et al., 2006; Watkins, 2009). Regardless, little research has been done to determine how behavior has been changing in light of this new perceived risk (Behrman et al., 2003; Helleringer & Kohler, 2005; Smith & Watkins, 2005). Research should be conducted to determine whether behavior changes that are occurring in areas of high HIV/AIDS prevalence could be utilized in future interventions rather than trying to implement a “standardized” western ABC approach.

**Theoretical Implications**

Most theoretical health behavior models that work at the individual level have always assumed that a perception of individual risk was needed for behavior change to take place. Increasing knowledge and personal risk through linear stages would make the individual change
behavior to reduce their risk (Ajzen & Fishbein, 1980; Weinstein, 1984). Empirical studies have shown that in areas of high HIV/AIDS prevalence, the individuals in that area have experienced an increase in HIV/AIDS prevention knowledge, mixed attitudinal change, and no behavior change (Kirby et al. 2006; Watkins 2009). Some have diagnosed the lack of behavioral change as the result of individual attitudes not adapting to personal risk. However, this study concluded that individuals do perceive personal risk and adapt their behavior to decrease their risk, but not to the ABC system. In fact, their increase in HIV/AIDS ABC knowledge may decrease their personal risk because they understand the risk factors and can avoid them.

The current theoretical framework for the programs is biasing the measurement of ABC behaviors. ABCs are outcomes of prevention, not theoretically backed strategies (Murphy, 2006), and more needs to be done about laying out a theoretical framework to understand why individuals make behavioral decisions. This should be done at both individual and the collective social normative level. Research has also shown that social networks strongly influence peers’ personal risk assessments, as well as expectations and subjective beliefs (Fiske & Taylor, 1991; Nisbett & Ross, 1980). Interaction with social networks has important effects on individual risk perceptions and an individual’s consideration of new behavior (Bearman et al., 2004).

The fact that so many development workers who were asked what theoretical framework their interventions followed did not understand the question or did not know the answer to the question is disturbing (See Appendix A). This is especially true for those who are higher echelon administrators who work in multilateral and bilateral funding agencies. Theoretical frameworks have been proven to improve educational interventions, and they act as a means of measuring how programs are enacting improvements or where they are succeeding (USAID, 1999). Simply put, they are the road map to success, and programs without them have a much harder time being
evaluated. More needs to be done about educating development workers to the theoretical framework that is behind their programs, and if they do not have one, they need to incorporate one. This lack of theoretical founding could be a part of the reason that educational interventions have thus far failed to accomplish most behavioral objectives.

Incorporating social network theory with existing individual-level health behavior theories could offer a better understanding of normative behavior, social influence, and risk perceptions that have been mostly neglected thus far. Social networks could provide a better perception of individual risk perceptions, possible barriers to individual risk perceptions, and the role of fear in risk perceptions.

**Policy Implications**

Because positive health behaviors have seldom occurred as a result of engaging in HIV/AIDS educational interventions, some have called into question the current prevention system for HIV/AIDS and whether it is functional or not (Potts, 2008). Increasing individuals’ factual knowledge about ways to prevent HIV/AIDS does not necessarily lead to behavior change (Kirby et al., 2006; Watkins, 2009). The underlying logic of many of the curricula necessitate unrealistically high cognitive reasoning skills about the disease’s viral transmission by target audiences, many of whom are unschooled or semi-schooled and most likely have less developed reasoning skills. Many of the educational interventions are aimed at lower educated populations so the program is composed of factual knowledge that is over-simplified to the extent that it does not engage its audience in wishing to enact change (Baker et al., 2009; Collins et al., 2009). More needs to be done about creating educational materials to fit the appropriate level of understanding without rendering it cognitively less challenging.
HIV/AIDS educational interventions need to move beyond fact-based interventions and begin to implement interventions that concentrate on motivation and gender power dynamics. The underlying assumption of ABC is that individuals are making decisions to minimize risk taking and negate the gender contexts in which individuals attempt to enact change. Recent research shows that women’s status in relationships plays a vital role in facilitating or hindering protected sexual intercourse (Pulerwitz et al., 2002; Pulerwitz et al., 2000). Women often endure lower wages, lack of assets, lack of property rights, and differential access to education, and these aspects are beyond their control in shaping HIV/ADS risks (Exner et al., 2003; Gupta, 2001; Gupta & Weiss, 1993). Women in economic duress are more likely to acquiesce to sexual intercourse without condoms with men who offer more money (Ainsworth et al., 2003). Women do not have the ability or opportunity to verify their partner’s fidelity or to negotiate condom use (Lurie et al., 2003a). Programs need to go beyond negotiating condom use with partners and need to concentrate on other avenues, such as sexual play without penetration, female condoms and refusal skills (Dworkin & Ehrhardt, 2007).

However, it is very important to remember that when enacting more gender-appropriate debates, males should not be left out of program implementation. More needs to be done to understand why men feel the need to have multiple sex partners and why they do not want to utilize condoms. Understanding how males identify with their masculinity and implementing programs that work with self-esteem would be worthy future attempts to curb HIV/AIDS.

Much needs to be done to dispel rumors that still reverberate throughout the Garifuna community. Although progress has been made toward increasing communication about sexuality within the community, work still needs to be done with regard to communication between parents and children, especially between extended family and the children whom they are
fostering. Garifuna still believe that they can visibly judge people who are HIV positive by their emaciated appearance. Programs need to address strongly the belief that HIV/AIDS cannot be assessed in such a manner.

Garifuna also believe that they can lower their HIV/AIDS risk by increasing their risk knowledge through sexual reconnaissance. Although some information may be gleaned from social networks, it will probably be inconsistent and incomplete. Nevertheless, providing the right information to Garifuna, especially females, could inform their decisions.

The in-depth interviews and focus groups revealed differences of opinion between the development organizations and the Garifuna. On the surface this disconnect is about perceptions of how the HIV/AIDS infection rate has burgeoned among the Garifuna in comparison to the rest of the Honduran population. This could be affecting other aspects of the educational intervention. Due to a long history of marginalization by the Honduran government, the Garifuna harbor a deep distrust of outsiders. This could pose a problem for outsiders trying to enact HIV/AIDS prevention programs. International organizations need to bolster trusting relationships with Garifuna communities by showing that the Honduran government is working to help the Garifuna community by discounting HIV/AIDS retroviral drugs and paying for community health center staff. The organizations also need to work with the Garifuna community to dispel any racism that occurred when they were targeted as a group of concern with men having sex with men and prostitutes in Honduras and as the initial source of the HIV/AIDS spread in that country. Having information from a face-to-face, trustworthy source is very important to the Garifuna—anyone from outside the community who expects to have success must take time to build rapport.
All of these programs should be tested by utilizing a randomized evaluation system. The results of the HDHS suggest that increasing women’s access to education and opportunities for economic development will help maintain abstinence and increase condom use. Credible impact evaluations could become a public good whose benefits could go beyond the organization or country implementing them. Programs that have been shown to be successful can be adapted for use in other countries, while unsuccessful programs can be abandoned.

**Putting the D, E, and F in Comprehensive HIV/AIDS Prevention Policy**

The qualitative findings reveal many different reasons, according to the NGO organizations and the Garifuna, for why HIV/AIDS has had a larger impact within the Garifuna communities than the rest of Honduras. However, three major themes emerged from a reading of the transcripts which are supported by research on HIV/AIDS educational programs and policy. These additions transcend the individualistic “ABC” program and look at external and structural factors that affect the spread of HIV/AIDS. This new model includes a “D” that would deal with the themes of discrimination (both of minorities and of People Living with HIV/AIDS (PLWHA) within a community. An “E” would look at the economic disparities, which cause a lack of access to educational opportunities and health facilities because of cost, and cause people to seek economic opportunities that increase their HIV/AIDS risk, such as migration and commercial sex. Finally “F” would represent female equality, in which women would have better economic opportunities, more say in negotiating sex with their male counterparts, and more freedom to purchase and utilize condoms without social repercussions.

Policy and HIV/AIDS curricula need to expand away from individualistic choice models, to encompass external structural factors that encompass the economic, social, and cultural contexts that influence behavioral choices (Fenton, 2004). The Garifuna, as a minority experiencing discrimination, are further aggravated by the added stigma of being part of a
concentrated HIV/AIDS epidemic. This “layered” stigma is often associated with concentrated epidemics, exacerbating the growth of the concentrated epidemic, if not the reasoning behind it (Castro & Farmer, 2005; Nyblade, 2006). However, at the center of the higher level of HIV/AIDS among minorities is really an argument of access to resources, which is covered in the next section on economic disparities in programs to stimulate economic access.

Although the Garifuna are expressing more lenient attitudes towards People Living with HIV/AIDS (PLHA), a stigma continues to be attached to PLHA. The stigma of being HIV+ has been shown to act as a barrier to HIV Volunteer Counseling and Testing (VCT), as well as treatment and prevention (Boer & Emons, 2004; Thomas et al., 2005; Turan et al., 2008). More time needs to be spent talking about HIV/AIDS stigma in educational prevention programs, but not necessarily in formal information sessions that concentrate exclusively on fact-driven information. Instead, more information needs to be spread about VCT, access to Anti-RetroVirus medication (ARV), and peer education. Never having had an HIV test is associated with negative attitudes towards PLHA (Hutchinson et al., 2007; Pulerwitz et al., 2008), and having access to ARV is associated with reduced stigma regarding PLHA (Wolfe et al., 2008). More needs to be done to increase informal communication about HIV/AIDS, through the media and peer education, since research suggests that these initiatives may reduce negative attitudes towards PLHA (Campbell et al., 2007). Reducing the stigma of PLHA encourages people to be tested, and gain better access to prevention information and condoms. As people learn their HIV/AIDS status, they are able to protect their loved ones, and decrease the spread of HIV/AIDS to others by practicing abstinence, reducing partners, and wearing condoms with those they decide to have sexual intercourse with.
One of the major problems with discrimination is the increased probability that those being discriminated against may not have the same economic opportunities as others. Studies have revealed positive correlations between poverty and HIV/AIDS prevalence, whether measured by Gross Domestic Product per person, the Human Poverty Index, or the Gini Index (Stillwagon, 2002). Stillwagon believed that biological reasons explain how poverty can increase an individual’s susceptibility to HIV/AIDS, as with other infectious diseases, “through malnutrition, parasitosis, lack of access to health care facilities…factors that undermine epithelial integrity and immunity, increasing likelihood of having STIs” and thus HIV/AIDS (Stillwagon, 2002, p.4). Socioeconomic possibilities show the connection between poverty and HIV/AIDS by highlighting the association between poverty with less education, making access to prevention education inaccessible, and poverty driven migration and prostitution increase HIV/AIDS risk factors (Ainsworth & Semali, 1998). Psychologically, poverty can create a risk perception that concentrates on the present and the need to obtain resources to survive, rather than to think about how actions can affect the near future and in “indifference to death”(Caldwell, 2000).

However, there is an equally compelling argument that, “Poverty seems necessary, but insufficient for transmission” (Butler, 2000, p.1446 ) To place the full blame for HIV/AIDS infection rates on poverty ignores the biological aspects of the disease. To become infected, one still needs to have an exchange of bodily fluids with an infected individual.

Regardless of the intellectual arguments, poverty plays a part in creating an atmosphere that increases an individual’s vulnerability to HIV/AIDS. Any program that strives to successfully reduce the spread of HIV/AIDS needs to have “Poverty reduction at the core of a sustainable solution to HIV/AIDS” (Fenton, 2004, p. 1187) More economic development
programs need to be developed for the Garifuna. These programs can be at the structural level, where they can include job training and debt relief, down to the individual level, where microcredit and income generating projects can be formed through the creation of cooperatives.

Almost all of the interviews with development organizations and focus groups agreed that male power dynamics is partially to blame for the high HIV/AIDS rates among the Garifuna. Male focus group members acknowledge that having multiple partners does make an individual at higher risk for HIV/AIDS, but they also believe that having multiple partners is a part of their culture that others “would not understand.” However, even though all parties agree that male machismo is a problem, there has been no evidence that any of the educational programs have done more than raise the awareness of the Garifuna to this problem and try to make women more comfortable about negotiating condom use with men. This is a good start, but increasing their ability to negotiate safer sex and increasing their knowledge of HIV/AIDS prevention techniques does not guarantee them a monogamous partner, nor a partner who is willing to use condoms (Dworkin & Ehrardt, 2007).

Gender policy over the last decade has involved leaving men out of HIV/AIDS prevention and concentrating on women (Exner et al., 1999). This shift in policy, coined by Higgens et al. (2010) as the “vulnerability paradigm”, portrays women as highly susceptible to HIV/AIDS due to biology, reduced sexual autonomy and men’s sexual power. However, Higgins et al. argued that this paradigm is often reduced down to “women are susceptible victims” and “men are active transmitter and not given to prevention” (p.244). This policy assumes that men do not want to protect themselves and engage in risky sexual behavior. Policy over the last ten years has taken the approach that male sexual drive is a natural force (Vitellone, 2000) and “boys
will be boys”. Therefore, we need to strengthen women’s ability to negotiate safer sex because we are incapable of curbing men.

Logan et al. (2002) argued that this approach ignores the socialization of women to seek “romance” and “love”, which makes it difficult to ask men to wear condoms because doing so allegedly questions their fidelity, trust and closeness. Furthermore, recent research has shown that in 30–40% of couples with at least one HIV+ person, the woman was HIV+, thus showing that women can have concurrent partners also (de Walque, 2006).

Much of the policy on condom use also ignores women’s possible unwillingness to use condoms due to reduced sensitivity and feelings of closeness. Research has shown that joint sexual pleasure could be the key to determining condom use (Higgins & Hirsch, 2007).

According to Higgins et al. (2010), having “Narrow definitions of what masculinity is a risk factor” (p.439 ). HIV/AIDS programs aimed at the Garifuna need to begin to incorporate men into HIV/AIDS prevention programs, by broadening their definitions of masculinity and making them a part of the prevention scheme. Some programs, mostly in South Africa, have begun to work with men to reshape their understanding of masculinity and help them rethink their vulnerability to HIV/AIDS (Peacock & Levack, 2004). Such programs have had positive results also. A two-year follow-up on this program showed men who participated in the program reporting an increase in condom use, less sexual partners, a decrease in transactional sex and substance abuse, and a decrease in partner physical abuse (Jewkes et al., 2006). Although these programs may not be perfect fits to the Garifuna culture and environment, they may be a good starting point and could possibly be adapted to them.
Modeling for HIV/AIDS Education with Policy Implications

Findings from this research and as reported in the literature on HIV/AIDS preventive education reveal a need to adjust not only the individualist models used to increase knowledge and change behavior, but to produce structural change for true HIV/AIDS prevention programs to work (see Figure 11.1). Understanding the economic environment of your target group is critical to understanding their access to information and education (Ainsworth & Semali, 1998), as well as the psychological aspects of forming risk perceptions (Caldwell, 2000). Being on the economic fringe can deny people access to prevention knowledge and access to healthcare—sometimes this lack of access can be deliberate, occurring through discrimination to specific minorities, for example. Furthermore, discrimination can occur within these minority groups, deliberately aimed at people living with HIV/AIDS (PLHA). Discrimination against PLHA can cause people not to be tested for HIV/AIDS, and to ignore risk because they believe that they are already HIV positive (Boer & Emons, 2004; Turan et al., 2008).

Gender inequity is another structural aspect that needs to be factored into the model in order to better understand why or why not HIV/AIDS behavior is being adapted. Many Garifuna women do not feel that they are socially able to negotiate condom use with their partners. Also, men believe that it is their inherent right as a part of their culture to have multiple partners.
Until Garifuna women are more comfortable negotiating condom use and men have a better understanding of their definition of masculinity, HIV/AIDS behavior adaption may be difficult to change.

The educational HIV/AIDS prevention campaign in Honduras needs to go beyond the ABCs and straight knowledge-based curricula. Although the ABC campaign has shown some positive behavior change results in Uganda, the campaign had broad support from the
government and local NGOs (Mukiza-Gaspere & Ntozi, 1995). The Honduran government could show its support by instigating broad economic development projects and a campaign that highlights awareness and direct support of the Garifuna problem.

Another area of importance is gaining an understanding of how HIV/AIDS prevention messages are being received. HIV/AIDS prevention messages, when geared to the Garifuna, are meant to purvey information on what HIV/AIDS is, how it is spread, the risk to the Garifuna of having unprotected sex with multiple partners, and the preventative behavior they need to follow to relieve them of these risk factors—namely, the ABCs of HIV/AIDS risk reduction behavior. However, information gathered from this study showed that although the Garifuna do have increased knowledge of what HIV/AIDS is, how they can reduce their risk of infection, and the ways in which they may be at risk, they choose not to abstain, reduce partners, or use condoms (COMCAVI 2006). Information from focus groups in this research showed, on the other hand, that the Garifuna do understand their risk for HIV/AIDS, and are reducing that risk by being more selective about their partners and engaging in sexual reconnaissance. Men and women are asking potential partners to provide information that will inform them whether sex will put them at increased risk. Asking potential partners about how many partners they have had, and if those partners are especially high for risk, are important questions. Women are also very reluctant to become involved in a relationship with Garifuna who have returned from the United States, because they are not able to access information needed to deduce potential risk.

Information gathered from this research shows that to understand future HIV/AIDS prevention programming, a qualitative component is needed to gain a better understanding of how the message is being understood and acted upon by the targeted audience. Survey research
is necessary but not sufficient to provide a total understanding of how behavior is changing and how to improve future programming.
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Appendix A

Do Honduran Development Workers Use Behavioral Theoretical Models?

A question to understand the theoretical base of each intervention was posed in each in-depth interview with Honduran development organizations working with HIV/AIDS. The question posed to them in the in-depth interviews was: *What kind of theoretical framework does your program use, if it uses one?* Of the seventeen in-depth interviews conducted, thirteen of them were with the heads of international funding organizations, national organizations, or national non-governmental organizations. Of the four Garifuna community workers interviewed, the first three were asked, but the last one was not, because it was decided from the first three interviews that they were not being taught about the theoretical framework of the prevention programs, or if their agency had them.

Of the responses from these interviews (see table 3.1), many did not understand what a theory was or could not answer the question, and one organization deferred to another organization that gave them professional assistance. From the interview responses, three health behavior theories became prevalent, Social Marketing, Bridging Behavior, and Stages of Change. Of the organizations that mentioned the Stages of Change Theory, none of them named it directly, but went on to describe the stages, and it was determined through the descriptors that they were describing the Stages of Change Theory. The agency that uses Bridging Behavior Theory did not seem very sure of the answer, saying, “A lot of it is using logic” as their answer, but a review of this organization’s material showed that the Theory of Bridging Behavior was their theoretical framework. This theory is also not very prevalent in the literature. Since the social marketing theory tends to be only aimed at condom use, for the purpose of this research, it
is assumed that Stages of Change is the dominant Health Belief Theory that is utilized by the HIV/AIDS prevention programs in Honduras.

**Development Organizations Responses to Theoretical Framework Used by Organization**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Bilateral Organization</td>
<td>Logic</td>
</tr>
<tr>
<td>2 National NGO</td>
<td>Stages of Change</td>
</tr>
<tr>
<td>3 Bilateral Organization</td>
<td>Stages of Change</td>
</tr>
<tr>
<td>4 Garifuna NGO</td>
<td>Stages of Change</td>
</tr>
<tr>
<td>5 Garifuna NGO</td>
<td>Confused theory with action plan</td>
</tr>
<tr>
<td>6 International NGO</td>
<td>Other Organization provides theory</td>
</tr>
<tr>
<td>7 Mulilateral Organization</td>
<td>Confused theory with action plan</td>
</tr>
<tr>
<td>8 Mulilateral Organization</td>
<td>Did not understand Question</td>
</tr>
<tr>
<td>9 National NGO</td>
<td>Confused theory with action plan</td>
</tr>
<tr>
<td>10 Honduran Government</td>
<td>Interdisciplinary initiatives</td>
</tr>
<tr>
<td>11 International NGO</td>
<td>Social Marketing</td>
</tr>
<tr>
<td>12 Garifuna NGO</td>
<td>Confused theory with action plan</td>
</tr>
</tbody>
</table>
# Appendix B

## Catalysts to Change Terms and How they Compare to Individualistic Behavior Change Models

Source: (Prochaska et al. 1994)

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Consciousness raising</td>
<td>Increasing level of awareness and more accurate information processing</td>
<td>Precontemplation Knowledge</td>
<td></td>
<td>Seeking information related to HIV/AIDS risk reduction</td>
</tr>
<tr>
<td>Dramatic Relief</td>
<td>Experiencing and releasing feelings.</td>
<td>Precontemplation Knowledge</td>
<td></td>
<td>Articles about the risks of unsafe sex or people with HIV/AIDS upsetting people, causing them fear of contracting it.</td>
</tr>
<tr>
<td>Environmental Reevaluation</td>
<td>Affective and cognitive re-experiencing of one's environment and problems.</td>
<td>Precontemplation Knowledge</td>
<td></td>
<td>The world would be a better place if people practiced safer sex.</td>
</tr>
<tr>
<td>Self-reevaluation</td>
<td>Affective and cognitive re-experiencing of one's environment and problems.</td>
<td>Contemplation Attitudinal</td>
<td></td>
<td>Being a responsible person includes practicing safer sex.</td>
</tr>
<tr>
<td>Self-liberation</td>
<td>Belief in one's ability to change and commitment to act on that belief.</td>
<td>Preparation Attitudinal</td>
<td></td>
<td>Make a commitment to avoid risky sexual situations.</td>
</tr>
<tr>
<td>Helping relationships</td>
<td>A relationship involving openness, caring, trust, genuineness, and empathy.</td>
<td>Action Behavior</td>
<td></td>
<td>Someone who listens to the individual talk about sexual behavior and AIDS.</td>
</tr>
<tr>
<td>Social liberation</td>
<td>Noticing social changes that support personal change.</td>
<td>Action Attitudinal</td>
<td></td>
<td>Believing society is changing in ways that make it easier to practice safe sex.</td>
</tr>
<tr>
<td>Counter conditioning:</td>
<td>Substituting more positive behaviors and experiences for problem ones.</td>
<td>Action Behavior</td>
<td></td>
<td>Engaging in other safer sexual practices.</td>
</tr>
<tr>
<td>Reinforcement management</td>
<td>Reinforcing more positive behaviors and punishing negative ones.</td>
<td>Action Behavior</td>
<td></td>
<td>Being praised by others for practicing safe sex and/or stigmatized for unsafe practices.</td>
</tr>
<tr>
<td>Stimulus Control</td>
<td>Restructuring one's environment or experiences so that problem stimuli are less likely to occur.</td>
<td>Action Behavior</td>
<td></td>
<td>Keeping condoms with you to remind yourself of safe sex.</td>
</tr>
</tbody>
</table>
Appendix C

Menu of Questions for Key Informants

Experience working with Garifuna
1. What is the goal of your organization?
2. How long has your organization worked with Garifuna communities?
   a. How long have you worked with the Garifuna?
3. What has been your experience working with the Garifuna?
4. What has been your biggest accomplishment?
5. What has been your biggest frustration?

Affects of HIV/AIDS on Garifuna
1. How have things changed in the Garifuna communities since AIDS has arrived?
   a. Have you noticed changes in peoples’ knowledge about HIV/AIDS?
   b. Have you noticed changes in peoples’ behaviors in regards to HIV/AIDS?
   c. Are the Garifuna conscious of the extent of the AIDS epidemic in their communities?
2. How do Garifuna feel about the world’s response to the epidemic?
   a. The government of Honduras?
   b. International organizations?
3. What are the Garifuna social norms around sexual behavior?
   a. Number of partners
   b. Safe sex practices
   c. Access to condoms
   d. Sex workers
   e. Machismo
   f. Women’s empowerment
4. Are there groups or certain jobs within the Garifuna community that is more at risk for AIDS?

Reason behind high rates of HIV/AIDS among Garifuna
1. What do you think causes the high infection rates of HIV/AIDS among Garifuna?
   a. Migration
   b. Racism
   c. Women’s role in the community
   d. Fishing industry
   e. Export processing zones
   f. Poverty
2. What do the Garifuna believe causes the high AIDS rates in their communities?

Communication of Garifuna about HIV/AIDS & sexual behavior
1. Where do most Garifuna get information about HIV/AIDS?
2. Are the Garifuna open to talking about sexuality?
   a. Friends
   b. family
Programs Initiated on HIV/AIDS

1. What kind of HIV/AIDS programs do you provide for the Garifuna?
2. What kind of theoretical framework does your program use, if it uses one?
3. How successful have programs been in the past? Why/why not?
4. What type of messages or abilities does your program try to teach?
   a. How is the message received?

If I wanted to talk to people who know the Garifuna community and the AIDS epidemic there, who else should I talk to?
Appendix D

Menu of Questions for Focus Group

Reason behind high rates of HIV/AIDS

1. Do you think HIV/AIDS is a problem in this community? Why or why not?
2. Why/why not do you think HIV/AIDS is a problem in these communities?
3. Who is at risk for being infected with HIV/AIDS? Are you at risk? Why/why not?

Where HIV/AIDS information is gathered:
1. Where did you learn about HIV/AIDS?
   Probes
   a. Radio
   b. TV
   c. Community theater
   d. Read about it
   e. School
   f. Friends and family
   g. Community health worker
   h. Co-worker
2. What did you think about the information that you received from these sources? How has it helped you make some decisions?
3. Have you ever talked to anyone about HIV/AIDS? Who?
   Probes
   a. Friend
   b. Family member
   c. Co-worker
   d. Community health worker
   e. Representative of the church
   f. Curanderos o Buyei (Spiritual Guide)
4. What did you think about the information that you received from them? How has it ever helped you make some decisions?
5. Are there some people that you can’t talk to about sexual relations? Who? Why?
6. What is the best source of HIV/AIDS information out there? Why?

Changes in Community:
1. How have things changed in this community in the last 5 years due to HIV/AIDS?
2. How have things changed for those families that have a member with HIV/AIDS?
3. What do you think of the Honduran Governments response to the HIV/AIDS problem in your communities?

Information about social norms:
1. How do find out about someone you want to date?
1) What kind of information would you want to know?
2. Does anyone here want to go to the U.S.? Why?
   i. What do you think of someone who just came back from the U.S. or from working out of the country?
3. How old is the right age to have sex for the first time? Why?
4. How long do you need to know somebody before you think it is alright to have intimate relationships with them?
5. Where do you learn about sex?
6. Where can you get condoms? Do people use them here?
7. What do you think about a person (Male or Female), that has multiple sexual partners?
8. How are things different for men and women when it comes to dating?
9. What do you think about a person that is infected with HIV/AIDS? Can you live with this person the same as other people, or do you need extra protection? Why?
10. What are the beliefs and customs of the Garifuna in relation to HIV/AIDS?
Appendix E

Focus Group Survey

Date: __________________________
Location: _______________________
Focus Group Number: ____________

1. How many years have you lived in this community? ________________

2. Age: _______

3. Gender: □ Male    □ Female

4. Education completed: □ None □ Some Primary □ Completed Primary □ Some Secondary □ Completed Secondary □ More than Secondary

5. Marital Status: □ Married □ Single □ Divorced □ Widowed □ Separated □ Free Union

6. Where do you work: □ Tourism □ Fishing □ Agriculture □ Do not Work □ Remittance □ Technical/Service □ Other

7. Do you think you are at risk for HIV/AIDS?
   □ Yes    □ No

8. How often do the following sources provide you good information on HIV/AIDS?
   
   **TV**
   □ Never    □ Very Seldom □ Seldom □ Sometimes □ Often □ Always

   **Radio**
   □ Never    □ Very Seldom □ Seldom □ Sometimes □ Often □ Always

   **Newspapers/Magazines**
   □ Never    □ Very Seldom □ Seldom □ Sometimes □ Often □ Always

   **Pamphlets**
   □ Never    □ Very Seldom □ Seldom □ Sometimes □ Often □ Always
Coworkers
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

Friends/Family Members
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

Community Health Worker/Nurse/Doctor
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

Non Government Organization
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

School
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always

Other (Please List) _________________________
☐ Never ☐ Very Seldom ☐ Seldom ☐ Sometimes ☐ Often ☐ Always
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Education:

Ph.D., Rural Sociology and Demography, Penn State University Fall 2009
Master of Public Health, East Stroudsburg University Fall 1998
B.S. in Community Health, Slippery Rock University Fall 1995

Professional Experience

Senior Analyst and HIV/AIDS Technical Advisor, Abt. Associates, 2010 to present
- Perform costing analyses for HIV/AIDS national strategic plans and complete HIV/AIDS sustainability analyses for these plans in sub-Saharan African countries
- Monitor and evaluate health programs for sustainability, behavior change, and innovation uptake
- Design monitoring and evaluation strategies and construct workplans for multi-million dollar grant applications (USAID) for healthcare improvement
- Assess health programs for scale-up and design and manage qualitative program evaluations

Research Assistant, Penn State University, 2006 to 2009
- Designed quantitative survey instruments and conducted in-depth interviews to evaluate the effectiveness of community and economic development programs for Pennsylvania
- Utilized the 2002 Census of Agriculture to design a sampling strategy for a national survey of farms
- Designed and administered a quantitative survey of 300 adolescents in 4 immigrant communities
- Surveyed Pennsylvania Workforce Improvement Boards and analyzed data using SPSS
- Translated, transcribed, and analyzed in-depth interviews with key informant farm workers
- Conducted interviews as part of a participatory rural appraisal of a rural community in Belize
- Conducted qualitative field research in Ghana to determine if HIV/AIDS school curricula successfully met the cognitive needs of their intended audiences

Peace Corps Recruiter, Penn State University, 2003 to 2006
- Organized and implemented multiple campus and community recruitment drives
- Interviewed prospective candidates, and successfully placed 100 Peace Corps Volunteers into programs worldwide

Peace Corps Volunteer (Health), Honduras 2000 to 2002
- Conducted training seminars for midwives to promote breast feeding and proper birthing procedures to reduce HIV/AIDS infection
- Trained peer educators and facilitated a theater group for HIV/AIDS information dissemination.
- Implemented child survival programs on hygiene, nutrition, and immunizations
- Conducted a water survey of 150 households, and organized large-scale rabies vaccination in rural communities

Honors/Awards:
- Jan 2007: College of Agricultural Sciences Research Travel Grant ($1000)
- Dec 2006: College of Agricultural Sciences Dissertation Grant ($2000)