EDUCATED AND AT-RISK: HOW THE SHORTAGE OF AVAILABLE MALE PARTNERS INFLUENCES HIV RISK FOR UNMARRIED COLLEGE-EDUCATED AFRICAN-AMERICAN WOMEN AGES 25-34

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ABSTRACT

This dissertation examined how perceptions of low availability of male partners in the African-American community influences HIV risk behavior in unmarried, college-educated African-American women ages 25-34, an understudied group. This study was conducted in two phases; the first phase consisted of a pilot study utilizing focus group and anonymous pen and paper survey. This pilot study was conducted to explore the socio-cultural and contextual factors associated with HIV risk behavior among a sample of 10 unmarried, college-educated African-American women between the ages of 25-34 through focus group discussion. The second purpose of the pilot study was to test the use of a survey designed for use with low-income young African-American women on a college-educated, age 25-34 population. Through analysis of focus group responses four themes emerged. Using the PEN-3 Cultural Model the positive, existential (unique), and negative influences of the following themes were reported: Limited pool of available male partners, Pressure to get married, Feelings of competition among women for male partners, and Men’s negotiating power in relationships.

The second phase consisted of a study utilizing a national internet-based survey sample for quantitative analyses to generate findings that resulted in a new scale that can be used to measure perceptions of limited partner availability (Perceived Partner Availability Scale) as experienced by unmarried, college-educated African-American women. Pearson correlations were used to investigate associations between perceptions of limited partner availability and condom use and sexual risk behavior. A Hierarchical Logistic Regression model was used to identify variables that may predict non-condom use in college-educated African-American women ages 25-34. Future directions for perceived partner availability and it’s impact on HIV vulnerability and are discussed. In Paper 3, A Hierarchical Logistic Regression Model was used to identify variables that may predict non-condom use in African-American college-educated women ages 25-34, specifically those who are not currently in committed relationships.
Suspecting or Knowing that your current partner has other sexual partners predicted a greater likelihood of condom use at last sex act in this group.

This study presents context for decision-making around condom use and non-condom use among this group of women. Demographic and HIV risk behavior profiles of the participants’ male partners were generated based on participant reports. Risk behavior associated with “man sharing” is also discussed. Future directions for HIV prevention research and intervention are presented.
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LIST OF ABBREVIATIONS

AIDS    Acquired Immunodeficiency Syndrome
CDC     Centers for Disease Control
HIV     Human Immunodeficiency Virus
IRB     Institutional Review Board
PPA     Perceived Partner Availability
SES     Socioeconomic Status
SISTA   Sisters Informing Sisters about Topics on AIDS
STI     Sexually Transmitted Infection
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“It is important that we learn humility, which says there was someone else before me who paid for me. My responsibility is to prepare myself so that I can pay for someone else who is yet to come.”

~Maya Angelou

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Chapter 1

INTRODUCTION

Fifty-seven percent of new Human Immunodeficiency Virus (HIV) infections in women in the United States occur in African-American women (Centers for Disease Control and Prevention [CDC], 2012a). Acquired Immunodeficiency Syndrome (AIDS) is currently a leading cause of death for African-American women between the ages of 25 and 34 (CDC, 2009a). Heterosexual contact is the most common method of HIV transmission for African-American women, accounting for 87% of HIV infection in this group (CDC, 2013). Given that African-Americans account for only about 14% of the population but comprise 44% of the HIV/AIDS cases in the population (CDC, 2013), the significant disparity that negatively affects African-Americans calls for urgent attention.

While the reasons underlying the disproportionate number of HIV infections identified in African-American women compared to other racial/ethnic groups have been explored, the conclusions drawn from reports and statistics about HIV risks are often based on stereotypes that African-American women are more sexually promiscuous than other groups (Boyce & Cain, 2007). In order to confront and address the effects of these stereotypes in health research, it is important to conduct studies that more comprehensively examine the societal, community, and individual factors contributing to the root causes and persistence of HIV vulnerability.

Though there is a dearth of literature on the psychosocial factors that contribute to higher incidence of HIV/AIDS in African-American women independent of socioeconomic status. Most of the published research on the topic explores African-American women at low socioeconomic status. The aim of this study is to explore the psychosocial and structural factors influencing HIV risk among college-educated and economically stable African-American women ages 25-34. The US Census Bureau reports that in 2008, of African-American women between the ages of 25-35, 47% had never been married (U.S.
There is very little information available about the HIV risk behaviors unique to college-educated women that do not fall under the low income/low education demographic, particularly in this age group. This group is of particular concern as they are largely absent from the discourse on HIV prevention, and are instrumental in the building and preservation of African-American family legacy, while HIV remains a leading cause of death for their age and racial group.

REVIEW OF THE LITERATURE

HIV and African-American Women

Studies suggest that while African-American women are no more likely to engage in unprotected sex or have multiple sexual partners than their White counterparts, African-American women are more likely to have sex partners with higher HIV risk (Tillerson, 2008) as African-American men have 7 times the rate of HIV infection as White men, and twice that of Latinos (CDC, 2013). Thus, it is not solely an individual’s behavior that determines their risk, it is also the behavior of their partner, and their position within a sexual network. As African-American men have some of the highest rates of HIV infection in the United States (CDC, 2009b), African-American women may be at a greater risk of infection due to the high-risk of their heterosexual male partners (Neblett, Davey-Rothwell, Chander, and Latkin, 2011; Nunn, Zaller et al., 2011). For example, African-American males initiate heterosexual sexual intercourse at earlier ages, and are more likely to report concurrent sexual partnerships than their White counterparts (Dariotis, Sifakis, Pleck, Astone, & Sonenstein, 2011), which is likely due to the fact that African-American men are less likely to be married than other races of the same age group (Cherlin, 2009; Bowleg, 2004).

Though individual-level factors for HIV risk are of great importance, they are limited in accounting for the disparities observed in transmission rates across racial groups. There are a number of structural factors at play which likely increase HIV risk for African-American men. If African-American
women are at greater risk for HIV infection as a result of their sexual partners, it is important to consider
the dynamics of heterosexual relationships in the African-American community, especially for those
women ages 25-34, where HIV is a leading cause of death. An important area of concern regarding
African-American heterosexual relationships is that of partner availability. A shortage of available
African-American men for potential partnerships exists, and is reportedly due to poor health and higher
mortality rates and violence (Geronimus et al., 1996), and high rates of incarceration (U.S. Dept. of
Justice, 2010). The shortage of available ideal African-American male partners for African-American
women presents greater difficulty in decision-making regarding dating and partner selection, as well as
sexual health choices (Packer-Williams, 2009).

Gender-ratio imbalance has been identified as one factor contributing to HIV vulnerability of
African-American women given a shortage of eligible men (Wingood & DiClemente, 2000). A gender-
ratio imbalance exists for any given population when less than 100 men are available for every 100
women (King & Allen, 2009). It has been reported that “African-Americans have the worst gender
imbalance experienced since the beginning of the census” (Davis et al., 2000, 4). The ratio of African-
American women to men is unbalanced, with 91 males per every 100 females (U.S. Census Bureau,
2010). The gender ratios for other racial groups are not as drastically imbalanced compared to African-
Americans, with Hispanics at 103 males per 100 females, Native Americans at 100 per 100 females,
Whites at 97 males per 100 females, and Asians at 91 per 100 females (U.S. Census Bureau, 2010).
Comparatively, although Asian-Americans experience similar gender-ratio imbalance, they are not
confronted with the same level of institutional racism and mortality risks that affect the African-American
community. The rates of HIV infection in other racial groups are also lower than African-Americans with
Whites accounting for 29% of new infections, Hispanics 18%, Asians 1%, and Native Americans
accounting for about 1% (Centers for Disease Control, 2009b). As such, there is a need to look beyond
individual behavior, and rather focus on structural factors such as low employment rates and high
incarceration rates for African-American males and how this has disrupted intimacy and relationships in this community (Fullilove, Fullilove, Haynes, & Gross, 1990).

African-American men who have been economically marginalized and/or incarcerated may be less appealing as potential life partners to women, which may be further narrowing the pool of ideal partners and further exacerbating the gender-ratio imbalance as it relates to partner availability in the African-American community. Unmarried, educated African-American women have expressed that they find it difficult to identify marriageable African-American male partners (Davis et al., 2000). If African-American men are at greater risk for HIV infection, it is important to consider structural factors that likely expose these men to HIV risk without blaming them for the impact on their partners’ increased risk. Disproportionate rates of incarceration for African-American men creates more heavily weighted gender imbalance, decreases economic mobility, and negatively impacts sexual networks and mixing patterns in the African-American community (Adimora et al., 2009). These relational dynamics in the African-American community have been attributed to higher rates of concurrent sexual partnerships likely resulting in higher rates of STI/HIV infections (Adimora, Schoenbach, Bonas, Martinson, Donaldson, & Stancil, 2002).

Sexual Networks

The African-American community has experienced social segregation, lower social standing, and a gender-ratio imbalance that have negatively impacted the stability of relationships, partner selection, and sexual networks within this community (Harawa et al., 2003). A sexual network is a group of individuals that are connected either directly or indirectly through sexual contact (Adimora et al., 2003). For African-Americans, studies suggest differing patterns of sexual networks compared with Whites (Adimora, Schoenbach, & Doherty, 2006). Within-racial group patterns of relationships tend to be the norm for African Americans, particularly women, compared to the Whites (Morris, Kurth, Hamilton, Moody, & Wakefield, 2009). As African-Americans are more likely to choose sexual partners who are
also African-American (Laumann & Youm, 1999), the sexual network becomes a smaller circle within which a transmittable disease can spread more rapidly.

Another important feature of African-American sexual networks is that of concurrent sexual partnerships. A concurrent partnership can be defined as multiple simultaneous sexual relationships, or sexual relationships that overlap in time (Morris, Kurth, Hamilton, Moody, & Wakefield, 2009). These types of partnerships facilitate an even more rapid transmission of infection through a sexual network than would be the case in sequential partnerships (Morris & Kretzschmar, 1995). In contrast to Whites, African-Americans with fewer sex partners are more likely to be sexually involved with partners who are involved in concurrent partnerships (Laumann & Youm, 1999), resulting in sexual networks where the high risk behaviors of a few increase the level of risk for the entire group because the network is more racially segregated, and thus smaller, resulting in more frequent interactions between high and low risk individuals (Laumann & Youm, 1999). Within-group mixing, particularly when there is higher risk within the group, would tend to increase infection rates for everyone in the group (Adimora, Schoenbach, & Floris-Moore, 2009). A study conducted in 2007 found that African-American men and women with “low risk” behaviors had 25 times higher incidence of HIV and other STIs than their white counterparts (Hallfors et al., 2007).

A study conducted by Morris, Kurth, Hamilton, Moody, & Wakefield (2009) examining concurrent partnerships and HIV prevalence disparities found that the rates of concurrency in African-American male participants between the ages of 20 and 38 were 3.5 times higher than their White counterparts, and 1.9 times higher than men of other racial backgrounds. In this same study, African-American female had rates of concurrency at 2.1 times higher than their White counterparts, and 4.1 times higher than women from other racial backgrounds.

The context of limited partners and its role in the notion of concurrency has become a primary concern in assessing control HIV transmission among African-Americans, particularly in the African-
American community where the sexual network is small and limited due to an unbalanced ratio of women to men, and the low availability of men with whom women prefer to develop sexual partnerships.

Gender-Ratio Imbalance and Limited Partners

Unbalanced gender ratios have been noted as predictors of STI risk and older age at marriage, both of which can negatively affect the quality and stability of relationships (Cunningham & Cornwell, 2008). Limited availability of partners has been cited as a significant predictor of HIV risk behavior, particularly for African-American women (Wyatt, 1997). It is likely that most young heterosexual adult women are eager to secure a marriageable partner with whom they can start a family. The limited availability of heterosexual African-American men in the community may make this goal difficult to achieve. African-American men in high demand by African-American women may have more power to negotiate the type of relationships that they desire because of their limited availability. This dynamic can privilege men’s decision and authority in a relationship. The more power available to men in heterosexual relationships, the greater the likelihood that women will have poor health outcomes (Wingood & DiClemente, 2000). Men who maintain concurrent partnerships may be less likely to concede to the demands of their female partners as they may feel confident that the woman will be hesitant to jeopardize the status of the relationship because they are aware that primary relationships are difficult to secure in the African-American community (Thomas & Thomas, 1999).

College-educated African-American women between the ages of 25 and 34 are likely in search of male partners for intimate relationships that eventually lead to marriage. African-American women who are contending with the gender-ratio imbalance that exists may relinquish negotiating power in their relationships, be more likely to settle for less desirable partners, accept infidelity, and agree to engage in unprotected sex (Bowleg, Lucas, & Tschann, 2004). A study conducted by Bowleg, Belgrave, and Reisen (2000) examining HIV/AIDS protective behavior using gender roles, relationship power strategies, and precautionary sexual self-efficacy as predictors in a predominately Black and Latina community sample
of heterosexual women noted that education level can influence gender role socialization. It could be assumed that African-American women with higher socioeconomic standing would be more empowered and exert more control in their interpersonal relationships; however, the study by Bowleg, Belgrave, & Reisen (2000) found no interactive effects of power in intimate relationships.

The gender-ratio imbalance may decrease a woman’s perception that she is likely to be able to find a suitable partner, fueling the spirit of competition for those African-American men who are economically stable and interested in making marital and family commitments (Wyatt, Forge, & Guthrie, 1998). In fact, a high level of education and financial independence can result in an African-American female being considered less desirable to an African-American male partner who does not have similar credentials, leaving the educated African-American woman less likely to marry or stay married (Packer-Williams, 2009). A limited pool of potential partners may create competition among women for those African-American men who are economically stable and interested in making marital and family commitments (Wyatt, Forge, & Guthrie, 1998). This spirit of competition places women of this demographic in a vulnerable position in negotiating sexual relationships within the context of dating. As this sense of competition is prevalent, women in this demographic may feel less confident in negotiating safer sexual behavior and establishing and maintaining mutually monogamous relationships for fear of losing their potential male partner to another less demanding female (Adimora et al., 2006). Further increasing risk, the male partner in this scenario may not terminate the relationship, rather assume another concurrent partnership, which as stated earlier, heightens risk for transmission of sexually transmitted diseases and HIV. African-American males may feel less inclined to establish emotionally and sexually committed monogamous relationships and experience less demand for condom use from their partners because the women feel that they lose their desirability and positioning for main partner status if they insist upon monogamy and condom use (Bowleg, Lucas, & Tschann, 2004). Such competition could place women in a vulnerable position of acquiescing to concurrent sexual relationships. Thus, gender-ratio imbalance may also promote concurrent sexual partnerships in the African-American community.
“Man sharing” is a term commonly found in the literature addressing concurrent partnerships in the African-American community (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). This term refers to African-American women engaging in sexual relationships with men who have other concurrent partnerships either with or without the knowledge of the women involved. This reinforces the point that a woman’s risk level can be a factor of systemic and social arrangements rather than her own individual choices. However, even within the context of known man sharing, women may still be unlikely to insist upon safer sex through condom use as the use of condoms may imply that “this person or encounter is not so special or unique” (Afifi, 1999). Men are usually more motivated by the erotic and physical aspects of sex, while women are more motivated by the romantic and relational attachment of sex (Houston, 1981).

Jones (2006) suggests that African-American women may anticipate that patterns of unprotected sex may result in increased connection through physical intimacy, and feelings of reassurance even from ambivalent male partners. Thus, women who are fearful about losing their male partners may gain a sense of stability (albeit fleeting) as a result of establishing unprotected sexual partnerships (Jones, 2006). As studies have found that the use of condoms in primary relationships can carry a stigma of distrust or limited commitment (Hammer, Fisher, Fitzgerald, & Fisher, 1996), women involved in man sharing may prefer to forego using condoms in order to maintain their outward sense of monogamy (Jones, 2006).

Ferguson, Quinn, Eng, & Sandelowski (2006) conducted a study at historically black colleges and universities and found that African-American college-age females believed that a disproportionate gender-ratio imbalance was responsible for men having multiple female sexual partners, and women relinquishing their agency and complying with men’s preferences for condom or non-condom use in order to secure a sexual partner. The young women in this study also perceived that the females on campus outnumbered males in greater numbers on campus than was actually the case. The investigators posited that African-American women beyond the setting of historically black colleges and universities are likely to have similar experiences in their attempts to form intimate partnerships (Ferguson, Quinn, Eng, &
Sandelowski, 2006). Thus, the experience of African-American women relative to vulnerability to HIV could be said to at the intersection of gender and culture.

A Gender and Culture-Based Approach for Intervention

African-American women are influenced by their relationships with their men and their broader social and institutional contexts (Bell, Bouie, & Baldwin, 1990). In researching new approaches for addressing the African-American community, Amaro (1995) suggests that practitioners adopt a new perspective from which to examine HIV risk behavior among women to incorporate concepts from gender studies and the psychology of women. Amaro offers four major assumptions that should foreground investigating women’s risk:

a) women’s social status as a central feature in women’s risk, b) connection and the relational self in women’s development and the fear of disconnection due to conflict as critical features in women’s risk, c) male partners as key role players in women’s risk, and d) experience and fear of physical and sexual abuse as an important barrier to risk reduction among some women (p. 442).

In 1986, Miller proposed a theory of women’s development that focused on connection. This theory postulated that the relational self is at the center of self-structure for women. A relational self refers to the ability to establish and enhance relationships with others. Miller proposes that a woman’s sense of self is grounded in her ability to establish and enhance relationships with others. Due to the centrality of this facet of life, women’s status as being partnered or able to establish and maintain relationships has great value for them. The value placed on being connected to others (in this case male partners) may outweigh other aspects of life, such as health protection. Miller believes that “for many women, the threat of disruption of connections is perceived not just as a loss of a relationship, but as something closer to a total loss of self” (p.83). With this in mind, one can draw the conclusion that for some women, creating a change or disruption in a relationship in an effort to reduce health risks such as HIV infection may require that a woman take a very big personal risk to her relational self, and thus, her
self-structure (Amaro, 1995). It is not difficult to understand then that for many women, maintaining a relationship is often times privileged over personal health risk to themselves, particularly when traditional gender roles reinforce a premium on love and romantic relationships (Higgins, Hoffman, & Dworkin, 2010).

Amaro (1995) advanced a model that centralizes women’s experience in addressing sexual risk: a) the centrality of connection to others as a core aspect of self, b) the degree to which conflict in relationships [especially conflict related to safer sex negotiation] and fear of disconnection is threatening to women, c) the degree of mutuality in the relationship with the male partner, d) skills and comfort in dealing with conflict, and e) the degree to which pregnancy and childbearing are perceived as avenues for further connecting with male partners. (p. 443). Additionally, a study by Wyatt et al. (2000) found that African-American women’s emotional need for a romantic partner may be more influential in their decisions about protective behaviors than personal risk prevention decisions alone.

In addition to considering the gendered aspects of HIV risk in framing this health behavior, we must also examine the dynamics of heterosexual relationships through a cultural lens. African-American heterosexual relationships have been influenced by the racism encountered by this group, particularly by way of the media and through institutional racism (Bell, 1990). These influences have affected how African-American males and females relate to one another. The media’s historic portrayal of African-American women as matriarchal, domineering, and emasculating, and of African-American males as passive and irresponsible (Kambon, 1998) is further compounded by the current state of African-Americans’ economic positioning with high rates of unemployment for males, and the emergence of the self-proclaimed “independent woman” found in the African-American community.

African-American children grow up internalizing conflicting definitions of what manhood and womanhood mean within the context of conflicting messages of a goal for economic independence and the reality of economic marginalization (Packer-Williams, 2009). Oftentimes, African-American girls are
taught that womanhood encompasses attaining the status of wife and mother, but are also warned that as an African-American female that it is likely that they will be left at some point by their African-American male counterpart, so they should be ready to assume responsibility and economic stability for themselves and family (Franklin, 1984).

American society associates manhood with social and economic independence, the ability to provide for family, dominance in gender relations, and sexual prowess (Liburd et al., 2007). African-American males historically, have not been as easily able to identify with the economic characteristics of manhood within American culture. A history of disenfranchisement, and economic and institutional racism have impeded African-American males’ ability to confidently identify with American masculinity and manhood. However, it is likely that the African-American women in search of life partners still desire men that display the traits of manhood valued by the culture. As the gender-ratio imbalance exists for African-Americans, and it may be more difficult for African-American men to meet criteria for manhood by traditional standards, African-American women have an even smaller pool of men to choose from that would be considered ideal partners for relationships and marriage.

As the gender issues experienced by African-American women appear to be specific to their racial group, it is also important to examine this context through a cultural lens. Africentric models and methods of analysis are optimal for use in studying these phenomena as Africentric models and methods differ from Euro-American methods in that they reflect the differences between African-Americans and other groups. The manner in which a group of people view the world is fundamental to the activities and behaviors in which they engage (Nobles, 2006). Africentric models account for the aspects of African-American worldview that provide clearer insight for examining the motivators for behavior within the African-American context. This is useful when attempting to unveil the underlying differences in disproportionate rates of behaviorally linked health outcomes such as HIV infection. Regarding the gender-ratio imbalance and its effects on relationship dynamics, Africentric analyses can help to clarify the cultural norms of African-American heterosexual relationships with respect to gender roles and
provide better perspective in examining how the gender-ratio imbalance has impacted those traditional roles and norms.

The social norms and values commonly associated with African-American culture should be included in the discourse on HIV prevention and education as culturally-based approaches may be more effective motivators for behavior change in this community (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). It is critical to prevention efforts that research focus on the dynamics at play within the heterosexual relationships of African-Americans in the United States in light of the structural issues that impact those relationships, and how they influence HIV risk behavior.

Traditionally, African-American culture is rooted in a sense of community and collectivism (Kambon, 1998). The Association of Black Psychologists and many African-centered psychologists have called for culturally based methods of analysis for addressing the conditions of Africans across the Diaspora based on the understanding that worldview and behavior context differ across culture (Williams, 2008). Scholars such as Kobi Kambon (1992), Na’im Akbar (1984), and Wade Nobles (1980) have developed definitions, theories, and measures that explore and account for traditional African ways of knowing and aspects of African worldview in the American context. These lend added insight in the deconstruction of the factors that contribute to the disparities in health behaviors and outcomes observed within this population. Prevention of HIV/AIDS in the African-American community would benefit from a paradigm shift in the design and implementation of interventions whereby the significant role of culture as it influences behavior and behavior change is central (Nobles, Goddard, & Gilbert, 2009). A cultural model of health introduced by King and Nobles (1997) states that human well-being is a “relational event” that results from and is defined by “situational-bound units of relationships between people” and their environment (King & Nobles, 1997). As the impact of structural forces (e.g.- high incarceration rates, low educational attainment, and joblessness, etc.) that affect African-American heterosexual relationship dynamics may be slower to change, the values, norms, and experiences of the African-American community may be more salient influences and predictors of behavior change as it relates to
HIV prevention than the individual-level approaches more characteristic of American culture. With this in mind, the current study will utilize the PEN-3 Cultural Model (Airhihenbuwa, 1989, 2007) along with the Health Belief Model (Rosenstock, Strecher, & Becker, 1994) to guide our understanding of the cultural influences and motivators for health behavior related to HIV risk in college-educated African-American women ages 25-34.

PURPOSE OF THE STUDY

The purpose of this study was to examine the extent to which the perceptions of low availability of male partners in the African-American community resulting from structural drivers influence HIV risk behaviors for heterosexual college-educated African-American women ages 25-34. African-Americans are disproportionately infected with HIV, and it is imperative that research studies explore the less conspicuous cultural influences on health behavior. The values, norms, and experiences of the African-American community may be more salient drivers and predictors of behavior change with regard to HIV prevention than the more commonly utilized individual-level approaches.

This study was conducted in two phases, 1) pilot study utilized focus group and anonymous pen and paper survey, and 2) a major study which utilized a national internet-based survey sample for quantitative analyses. The pilot study was conducted to explore the socio-cultural and contextual factors associated with HIV risk behavior among a sample of 10 unmarried, college-educated African-American women between the ages of 25-34 through focus group discussion. The second purpose of the pilot study was to test the use of a survey designed for use with low-income young African-American women on a college-educated, age 25-34 population. In Phase 2, quantitative data from a nation-wide internet-based survey were used to measure perceptions of low availability of male partners as experienced by unmarried, college-educated African-American women and explore how these perceptions, in concert with other demographic and behavioral factors may increase their HIV vulnerability.
RESEARCH QUESTIONS

The current study seeks to examine the extent to which the socio-cultural context of gender-ratio imbalance in the African-American community resulting from structural drivers influences HIV risk behaviors for heterosexual college-educated African-American women ages 25-34. As African-Americans are disproportionately infected with HIV, it is imperative that research studies explore the less conspicuous cultural influences on health behavior. The values, norms, and experiences of the African-American community may be more salient drivers and predictors of behavior change with regard to HIV prevention than the more commonly utilized individual-level approaches. Therefore, the specific research questions are:

1. What are the perceptions and perspectives of a small sample of unmarried, heterosexual, college-educated African-American women ages 25-34 about the gender-ratio imbalance, and its effects on heterosexual relationships and HIV risk in the African-American community?
2. What relationships exist between perceptions of limited partner availability on condom use behavior in a nation-wide sample of unmarried, heterosexual, college-educated African-American women ages 25-34?
3. What are the demographic and behavioral factors that may predict condom use in unmarried, heterosexual, college-educated African-American women ages 25-34?

STUDY OVERVIEW

This dissertation is comprised of three research papers from the larger study. It is organized in seven chapters. Chapter 1 provides background on the problem of HIV/AIDS in Africa-American women, and a review of the literature on gender-ratio imbalance, African-American sexual networks and HIV risk. Chapter 2 provides an overview of the theoretical framework, methodology, and research design for the overall study. Chapter 3 presents the findings from Paper 1, which responds to research
question 1 by using focus groups to explore participants’ experiences and perceptions of the gender-ratio imbalance in the African-American community with regard to sexual risk-taking. The PEN-3 Cultural Model was then used to identify the positive, existential (unique), and negative influences associated with HIV risk behavior. Chapter 4 presents findings from Paper 2, which responds to research question 2 by using quantitative data from a nation-wide internet-based survey to analyze correlations between perceptions of limited partner availability and communication about sexual risk and condom use behavior. This paper also presents hierarchical logistic regression analysis to identify demographic and behavioral factors that may predict HIV risk behavior as defined by non-condom use at last sex. Chapter 5 presents findings from Paper 3, which responds to research question 3 and examines only those women in the sample who are not in committed relationships. Correlations between the scale examining perceptions of partner availability and communication about sexual risk and condom use behavior are presented for this group. Hierarchical logistic regression analysis to identify demographic and behavioral factors that may predict HIV risk behavior as defined by non-condom use at last sex. Chapter 6 synthesizes discussion from Papers 1, 2, and 3, and Chapter 7 presents conclusions, strengths and limitations of the study, as well as implications for future research in HIV prevention for African-American women.
Chapter 2
Methodology

Theoretical Framework

The Health Belief Model presents a variety of constructs that help to explain why individuals take certain actions to prevent, screen for, or control illness (Rosenstock, Strecher, & Becker, 1994). It asserts that if individuals consider themselves to be susceptible to a particular health problem, believe that that health problem could have serious consequences, and feel confident that a particular course of action would reduce their risk for or severity of the health problem, with the anticipated benefits outweighing the perceived barriers to or cost of the course of action, individuals will be likely to take action in addressing the health problem. A few constructs of the Health Belief Model particularly useful in explaining this conceptual model are perceived benefits, perceived barriers, and self-efficacy.

*Perceived Benefits* refers to the positive gains that an individual believes will result from undertaking a particular behavior change with regard to addressing a particular health problem. In the current study, minimizing the number of sexual partners and consistently using condoms has the benefit of reducing the risk for HIV (and other STIs). This construct is assessed in the current study by asking participants about their primary reasons for using condoms (i.e.- preventing HIV, preventing other STIs, and preventing pregnancy), and reported in the Condom Use profile in Chapter 5.

*Perceived Barriers* refers to the negative consequences that an individual associates with making behavior changes to avoid a particular health problem. In the current study, a desire to form romantic partnerships that result in marriage, a desire for sexual intimacy, and a gender-ratio imbalance in the African-American community may all serve as barriers to consistent condom use. A key point of the Health Belief Model is that it is optimal for behavior change if the perceived benefits outweigh the perceived barriers. The proposed conceptual model depicts that the more immediate psychological and sociocultural motivators for inconsistent condom use such as fear of losing a romantic partner and loss of
Intimacy may outweigh the long-term concerns that promote HIV prevention behaviors. This construct was assessed in the current study by asking questions about participants’ difficulty in establishing and maintaining romantic relationships as part of the Gender-Ratio Imbalance Scale.

*Self-Efficacy* refers to an individual’s belief in their own ability to decide on a particular behavior and produce the desired outcomes (Bandura, 1990). This concept is assessed in the current study whereby participants are asked to indicate their level of confidence in their ability to negotiate for safer sex and condom use, as well as refuse sex when their partner does not agree to using condoms. In this context, we use the term *Sexual Self-Efficacy*.

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**FIGURE A. Health Belief Model Components and Linkages with Current Study**

<table>
<thead>
<tr>
<th>Modifying Factors</th>
<th>Individual Beliefs</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong> (25-34 years)</td>
<td><strong>Perceived Benefits</strong> (Pregnancy Prevention; STI/HIV Prevention)</td>
<td><strong>Inconsistent condom use</strong></td>
</tr>
<tr>
<td><strong>Gender</strong> (Female)</td>
<td><strong>Perceived Barriers</strong> (Desire for romantic partnerships/marriage; Desire for sexual intimacy; Gender-ratio imbalance/low partner availability)</td>
<td></td>
</tr>
<tr>
<td><strong>Ethnicity</strong> (African-American/Black)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Status</strong> (Unmarried; College-Educated)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Health Belief Model states that in order to achieve successful behavior change, individuals must feel that their current behavior presents a realistic and significant risk to their health (perceived susceptibility), and that making specific changes will result in positive health outcomes (perceived benefit), with low cost (perceived barriers), while possessing the necessary skills to implement the change and overcome any perceived barriers (self-efficacy). However, there are other factors that may either facilitate or complicate positive health behavior change. The PEN-3 Cultural Model helps illuminate these other factors which oftentimes end up being left out of behavioral analyses than focus almost exclusively on negative behaviors. For instance, when investigating health disparities in HIV/AIDS infection, structural variables and cultural meanings such as search for intimacy in a pool of limited males may drive many of the reported vulnerability associated with incidence of HIV/AIDS.

The PEN-3 Cultural Model is used as a theoretical guide in this study. It was developed by Airhihenbuwa (1989, 2007) in response to the lack of attention paid in research to the ways in which culturally based beliefs and perceptions influence behavior. This model examines the cultural contexts of health related beliefs and behaviors, while also serving as a useful tool in planning culturally appropriate health promotion programs and interventions. The PEN-3 Cultural Model has been used to study various illnesses and health related behaviors against the backdrop of a variety of cultures such as HIV/AIDS stigma in South Africa (Airhihenbuwa et al., 2009), cervical cancer prevention among Latina immigrants (Scarinci et al., 2012), Type-2 Diabetes prevention in British Bangladeshis (Grace et al., 2008), and HPV vaccine acceptability and medical mistrust among African-American female college students (Bynum et al., 2012).
Figure B: The PEN-3 Cultural Model

The PEN-3 Cultural Model consists of three domains; 1) Cultural Identity, 2) Relationships and Expectations, and 3) Cultural Empowerment. Each domain contains three related dimensions.

**Cultural Identity**: This domain examines how one’s culture can influence their identity, and thus their decision-making. Political, economic, and social experiences shape identity and are significant in the process of making health decisions and influencing health behaviors. This domain is comprised of the following dimensions:

- **Person**: the degree to which the person is dealing with his/her own identity
- **Extended Family**: the influence of family members in decision-making
- **Neighborhood**: availability or lack of community resources, such as infrastructural and institutional power which affects decision-making

**Relationships and Expectations**: This domain examines the ways in which culture can define the roles and expectations in family and community relationships. In this context, personal actions are examined as functions of broader social cultural contexts. This domain is comprised of the following dimensions:
**Perceptions:** knowledge, attitudes, beliefs and values in decision-making that may facilitate or hinder motivation for health behavior

**Enablers:** cultural, societal, or structural influences that may promote or impede health behavior

**Nurturers:** the ways that families, friends, and/or community members support or discourage health behavior

**Cultural Empowerment:** This domain affirms the opportunities to incorporate culture into health promotion planning. Cultural influences on health can range from positive to negative. This domain also highlights the unique aspects of culture that influence health behavior. This domain is comprised of the following dimensions:

- **Positive:** beliefs, values, and relationships that promote health behavior
- **Existential:** beliefs, values, and relationships that are unique to a culture that may or may not influence health behavior
- **Negative:** beliefs, values, and relationships that may pose a barrier to health behavior

To our knowledge, the PEN-3 Cultural Model has not been previously used to investigate the influence of the gender-ratio imbalance in the African-American community on HIV risk behavior in heterosexual African-American women. It is important to note that the Relationships and Expectations domain, and Cultural Empowerment domain are utilized for examining and categorizing experiences and perceptions of a population prior to planning interventions targeted for that particular group. The Cultural Identity domain is used to assist researchers in identifying the best point-of-entry for developing an intervention. This research study involved analysis of the Cultural Empowerment domain only, as this is in large part an exploratory analysis of a novel approach to understanding HIV risk behavior, and not an intervention study.
Study Participants

This study was conducted in two phases. Phase One (detailed in Chapter 3/Paper 1) took place July 2011 in Chicago, Illinois, an urban US city. In this phase we used a purposive network sampling strategy that resulted in recruitment of 10 women who met the inclusion criteria of being English-speaking, unmarried, heterosexual, African-American, college-educated, age 25-34. These women were asked to participate in focus group discussions and complete a pen-paper questionnaire. Phase Two of the study (detailed in Chapter 4-5/Papers 2 & 3) took place October-November 2012. Participants in this phase of the study were also recruited through network sampling, this time via the internet. Of those recruited, 262 participants met the inclusion criteria as listed above, and were located in different cities across the United States. These women were asked to complete an anonymous internet-based survey.

Institutional Review Board (IRB) approval for each phase of the study was obtained from the Pennsylvania State University Office of Research Protections prior to the start of data collection activities.

Data Collection

In Phase One, due to the fear and stigma associated with HIV/AIDS, it was thought best to avoid using the terms HIV or AIDS in recruitment. We instead solicited participation by inviting heterosexual women to discuss issues of dating and sexual relationships in the African-American community. Initially, six women agreed to participate in the first focus group session, but only three women actually attended. The second focus group was comprised of seven women. All participants were given the Pennsylvania State University IRB-approved consent forms which were reviewed and summarized at the start of the focus group session. Matters of confidentiality were explained, with particular attention given to the importance of respecting the identity and sensitive information shared by other participants outside of the focus group session. Participants were asked to assume pseudonyms for themselves in the focus group, to allow for anonymity. Each focus group session lasted 60-90 minutes, and the questionnaires took about 10 minutes to complete. At the conclusion of the session, participants were provided information about
psychological counseling and HIV testing services in the Chicago area. Each participant was paid $25 for their time and participation in the study.

In Phase Two, participation was solicited via the internet using the website, Facebook. An IRB approved recruitment script (please see appendix) was posted on the researcher’s personal Facebook page to invite participants to take the online survey. The recruitment script was also forwarded to women meeting the inclusion criteria, and as with network sampling, the recruitment script was forwarded to others who might be eligible and interested in participating in the survey. The recruitment script directed participants to a link to the internet survey, where the IRB approved implied consent form was provided, explaining the purpose of the study, limitations on confidentiality while utilizing internet technology, and participants’ option to end their participation at any time. There were no time restrictions on completing the internet survey. However, most participants completed the entire survey in 10-15 minutes. At the conclusion of the survey, participants were given an option to be directed to a separate website where they could enter their email address into a lottery to win a $100 Amazon gift card.

Data Analysis

Phase One- Qualitative Analysis

In Phase One, focus group transcripts were analyzed using the process of content analysis (Krippendorf, 2012) to identify emerging themes. The focus group questions were organized into various topics, which were further narrowed into primary categories. Participants’ responses were then matched with categories until saturation was achieved and no additional categories were revealed. The Cultural Empowerment domain of the PEN-3 Cultural Model was then used to guide the organization of the categories by identifying the positive, existential (unique), and negative aspects of the cultural themes emerging. A full description of the data analysis for Phase One is provided in Chapter 3.
Phase Two - Quantitative Analysis

In Phase Two, the quantitative data from the internet survey were first analyzed using descriptive statistics to determine frequencies, means, etc. A Perceived Partner Availability Scale was developed using factor analysis of the survey questions addressing participants’ perceptions and experiences of gender-ratio imbalance. Pearson correlations were then generated to determine whether or not a significant relationship exists between scores on the Perceived Partner Availability Scale and sexual risk behavior and condom use. A full description of this analysis is provided in Chapter 4. Hierarchical Logistic Regression analyses were performed to identify demographic and behavioral variables that may predict non-condom use at last sex. All analyses were conducted using SPSS (version 19). A full description of this analysis is provided in Chapters 4 and 5.

Conclusion

In summary, this chapter provides an overview of the theoretical framework that guides this study, and describes the methods used for data collection and analysis. The Health Belief Model was used to identify perceived benefits, perceived barriers, and self-efficacy associated with HIV risk behavior, while the PEN-3 Cultural Model has been used successfully to examine the influence of culture on health behavior in past studies, and is used here for the first time to explore the effects of a structural and socio-cultural phenomenon; gender-ratio imbalance in the African-American community on HIV risk behavior in unmarried, heterosexual, college-educated African-American women ages 25-34. This study utilizes a mixed-methods approach of focus group and survey data to examine this construct.
CHAPTER 3

Paper 1

Educated and At-Risk: How the Shortage of Available Partners Influences HIV Risk for College-Educated African-American Women

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Collins O. Airhihenbuwa, PhD, MPH
Shedra Amy Snipes, PhD

Abstract

A critical area of concern regarding HIV risk for African-American female heterosexuals is that of partner availability. Limited partner availability is related to a shortage of African-American men available for potential partnerships, which exists for a number of reasons; including poor health, high mortality rates, violence, and high rates of incarceration. While some have argued that low partner availability may be responsible for increased vulnerability of African-American women to HIV/AIDS, it is not evident what this means for college educated women as most of the published research explores African-American women at low socioeconomic status. This study’s aim is to explore the psychological and social factors, particularly the shortage of available partners, which may influence HIV risk behavior among college-educated African-American women, ages 25-34. This group is of particular interest as they are not often represented in studies on HIV prevention, while their dating and sexual negotiation patterns may differ from those of their lower-educated and lower-income counterparts. Focus group transcripts and questionnaire data were analyzed revealing four emergent themes that may influence HIV risk behavior for this group of women. We discuss implications for the future of designing culturally appropriate interventions to eliminate HIV/AIDS health disparities in the African-American community.

Introduction

On Joan’s 30th birthday, she began to reflect on the successes she’s enjoyed in different areas of her life thus far. Joan began to feel quite accomplished as she’d graduated magna cum laude from a 4-year college, and gone on to complete graduate school. She’s even managed to secure a prestigious
position in her chosen career. Joan is held in high regard by her colleagues, and lives by the motto “Work hard, play hard”. She’s an avid traveler, and has taken many trips with her family and single girlfriends as she seeks to maintain work-life balance. Joan is quite proud of the new home she purchased last year, but also defines success by how much she’s able to give back, so she volunteers regularly with a local youth mentoring program in her community. Her life is one of fulfillment and happiness, but Joan still feels an emptiness. She’s accomplished so much, but longs for the missing piece… a man; the partner with whom she can find love, marriage, and start a family. She thought that she would have checked this off of life’s “to do” list by now, and begins to wonder if there is something that she’s doing wrong. How can it be that she is so beautiful, smart, successful, and yet alone? It’s not that her standards are too high. She just wants a mate who matches her on education, income, and race. But, therein lies the problem. This man is hard to find, because African-American women of her socioeconomic status outnumber their African-American male counterparts. So, it is not her fault! Societal factors make this so, but what is she to do given the situation? She’s often heard the saying, “A good Black man is hard to find.” She’s also heard, “If you find a good man, you better hold on to him!” These messages have often been accompanied by expressions like, “What you won’t do for your man, the next woman will.” These sentiments have played back in Joan’s head when she’s found herself in relationships in the past. These thoughts compound the pressures that she feels given her age and indefinite single status. “But how DOES a woman ‘keep’ a man? What WILL the ‘next woman’ do?”

Though Joan is hypothetical, her story is real, and her situation not unique. Popular culture has been giving increased attention to this particular quandary for educated African-American women as of late; however, this phenomenon is understudied in scientific literature, particularly as it relates as a psychosocial driver for health behavior. Here we share the experiences of college-educated African-American women with regard to partner availability and sexual risk-taking, exploring how psycho-social pressures may result in trade-offs in decision-making which could be potentially life-threatening.
Fifty-seven percent of new Human Immunodeficiency Virus (HIV) infections in women in the United States occur in African-American women (CDC, 2012a), and Acquired Immunodeficiency Syndrome (AIDS) is a leading cause of death for African-American women ages 25-34 (CDC, 2012b). As African-Americans account for only about 14% of the population and make up 44% of new HIV/AIDS infections in the United States, these statistics illustrate disproportionate rates of infection (CDC, 2013).

While evidence suggests that African-American women are no more likely to engage in unprotected sex or have multiple sexual partners than are White women, heterosexual African-American women are more likely to have sex partners with higher HIV risk (Tillerson, 2008). Since heterosexual contact accounts for 87% of HIV transmission for African-American women (CDC, 2013), it is important to consider the dynamics of heterosexual relationships in the African-American community.

New research suggests that a critical area of concern regarding HIV risk for African-American heterosexual women is that of partner availability. There is a significant lack of available African-American partners for Black women who prefer Black partners. A shortage of African-American men who are available for potential partnerships exists for a number of reasons, including poor health, higher mortality rates, violence (Geronimus, Bound, Waidmann, Hillemeier, & Burns, 1996) and high rates of incarceration (Pettit & Western, 2004). Some have argued that gender ratio imbalance may influence and explain increased vulnerability of African-American women to HIV and AIDS (Wingood & DiClemente, 2000). However, what is not in evidence is what this means for college educated women. This group is of particular interest as they are not often represented in studies on HIV prevention, while their dating and sexual negotiation patterns may differ from those of their lower-educated and lower-income counterparts who are more often the subject of study in HIV research among African-Americans.

To fill the critical gap in understanding of issues that may increase HIV risk among African-American women, the aim of this study is to explore the psychological and social factors, particularly the
gender-ratio imbalance, mate choice, and sexual behaviors among college-educated African-American between the ages of 25-34.

Background

Sexual Networks & Gender-Ratio Imbalance

Sexual networks are groups of individuals that are connected- either directly or indirectly-through sexual contact (Adimora et al., 2003). African-Americans tend to have a relatively smaller sexual network compared to other races, explained by population size as African-Americans make up only 14% of the United States population, and are more likely to choose only other African-Americans as sexual partners (Laumann & Youm, 1999). Finally, African-Americans have the highest ratio of women to men compared to other racial groups in the United States (Tillerson, 2008). These social dynamics have been attributed to higher rates of concurrent sexual partnerships in past literature (Adimora et. al, 2002; Adimora et. al, 2003; Adimora, Schoenbach & Doherty, 2006) likely resulting in higher rates of STI/HIV infections in the African-American community (Adimora et al., 2002). Thus HIV risk behavior of African-American women may be linked to the occurrence of concurrent partnerships as well as the shortage of eligible and available African-American male partners for heterosexual relationships (Miller, Burns, & Rothspan, 1995).

The extent to which education intersects with increased HIV risk is not yet well understood. However, some research is emerging that may help inform valid hypotheses. For example, a study examining gender roles, relationship power strategies, and precautionary sexual self-efficacy as predictors of HIV/AIDS protective behavior in a predominately Black and Latina community sample of heterosexual women suggested that education level would influence gender role socialization (Bowleg, Belgrave, et al., 2000). While it might be assumed that African-American women with higher socioeconomic standing would be more empowered and exert more control over their sexual relationships than those with less education, this study found that high socioeconomic status in women had no
interactive effects on power and negotiation in sexual relationships. Another qualitative study investigating heterosexual relationships and condom use at historically black colleges and universities, found that the gender ratio imbalance was perceived by African-American female college students as responsible for males having multiple female sexual partners, and women relinquishing their agency and complying with men’s preferences for non-condom use (Ferguson, Quinn, Eng, & Sandelowski, 2006). The same investigation suggested that women also engaged in such partnerships and non-condom use in order to secure partnerships. The investigators presented new directions for future research theorizing that other African-American women beyond the setting of historically black colleges and universities; in settings where African-Americans are less heavily concentrated, are likely to have similar perceptions and experiences as reported by the college women in their attempts to form intimate partnerships. The current research then, seeks to investigate: a) how the gender-ratio imbalance is perceived by college-educated African-American women between the ages of 25-34, b) how African American women feel the gender-ratio imbalance impacts heterosexual relationships in the African-American community, and c) the influence this has on their sexual decision making and HIV protective behaviors.

**Theoretical Framework**

The PEN-3 Cultural Model (Airhihenbuwa, 1989, 2007) was used as the organizing framework for this study. It guides researchers in understanding the ways in which culture and cultural identity influence health behavior. This model can also be used as a tool for planning culturally appropriate public health and health promotion/education interventions and programs.

A history of unequal treatment for African-Americans has impacted economic mobility and romantic partnerships. Here we use the Cultural Empowerment domain of the PEN-3 Cultural Model to understand these cultural influences on women’s agency around partner selection and sexual risk-taking. The Cultural Empowerment domain features three dimensions as well- Positive (identifying positive attributes rather than focusing only on the negatives), Existential (understanding the qualities that make
the culture unique but should not be blamed for program failure), and Negative (values and behaviors that contribute to health problems). Here we examine the manner in which the themes are either positive, negative, or unique with regard to sexual risk taking and HIV risk behavior.

It is important to note that the PEN-3 Cultural Model also contains two other domains, 1) the Relationships and Expectations domain, and 2) the Cultural Identity domain which are used to assist researchers in identifying the best point-of-entry for and evaluation of intervention programs. This research study involved analysis of the Cultural Empowerment domain only, as it is utilized in early stages of research for understanding a population prior to planning interventions targeted for that particular group. As this is the pilot phase of a larger study, analysis on this domain is most appropriate for this type of study.

**METHOD**

This is an exploratory pilot investigation. We utilized 2 focus group sessions and survey methods to gather information from a sample of unmarried, heterosexual, college-educated, African-American women between the ages of 25-34. The overall focus group goal was to gain perceptions and perspectives on the gender-ratio imbalance as experienced by college-educated African-American women, and its effects on heterosexual relationships and sexual risk taking in the African-American community. Because our effort was to gather data that reflected variety of experience, as well as the opportunity for participants to build upon each other’s responses, the focus group method was deemed appropriate to explore the research questions.

**Recruitment and Human Subjects Protection**

The Institutional Review Board at the sponsoring university approved the research protocol for this study prior to its start. We used a purposive network sampling strategy to identify 10 women who met the inclusion criteria of being English-speaking, unmarried, heterosexual, African-American, college-
educated, age 25-34. Our recruitment efforts took place in Chicago, Illinois. Participants were approached by key informants through face-to-face interaction and telephone calls. Two key informants used contact information that they gained prior to this study to identify women that would likely fit the eligibility criteria, and asked those women to invite other potential participants as well. Using key informants was useful as a recruitment strategy in this study as it utilized individuals who potential participants were already affiliated and comfortable with to encourage participation in the study. After total recruitment, 13 women agreed to participate in the study; however, 10 women were present at the time of data collection. Six women agreed to participate in the first focus group session, but only three women actually attended. The second focus group was comprised of seven women. The intent was to keep the sample size small to reduce concerns about confidentiality, stigma associated with HIV/AIDS, and to encourage a comfortable environment for discussing sensitive topics. Based on the sampling recommendations for qualitative research of Kuzel (1992) and Sandelowski (1995) indicating that a sample size of 6 to 10 is adequate for a homogeneous sample, we conducted focus groups with a total of 10 participants. In this case a homogenous sample means that interviewees were of the similar age, SES status, female, African-American, and unmarried.

Data Gathering

*Focus Group Guide.* The focus group guide (see appendix) explored the women’s perceptions of the gender-ratio imbalance, limited availability of male partners, and partner preferences in the African-American community. Questions also probed women’s interpretations of how the limited availability of male partners influences heterosexual relationships, and subsequently sexual behavior and HIV risk for African-American women of their sociodemographic characteristics and age group. The focus group guide was designed to encourage a conversational discussion between the participants. Some sample interview questions were: “Do you believe that there is a shortage of datable men in the African-American community?” “Do you feel that the shortage of African-American males impacts romantic
relationships in the African-American community?” and “Have you ever stayed with a male partner when you were aware that he had other sexual partners?”

Questionnaire. In addition to focus group evidence, participants were also asked to complete a self-administered pen-and-paper questionnaire at the conclusion of the focus group session. This questionnaire was adapted from DiClemente & Wingood’s (1995) SISTA (Sisters Informing Sisters about Topics on AIDS) Project Original Evaluation Instrument, which was developed for use with young African-American women. This questionnaire included demographic questions, questions about relationship status, as well as questions about knowledge of HIV disease, protective behaviors, STI/HIV testing, and perceptions about partner fidelity.

Procedures and Issues of Sensitivity

To reduce the likelihood of stigma associated with HIV/AIDS, we avoided using the terms HIV or AIDS in early study process, and gradually introduced such language throughout the study period. To do this, we first solicited participation by inviting heterosexual women to discuss issues of dating and sexual relationships in the African-American community. The focus groups were conducted in July 2011 in Chicago, Illinois, USA, and led by the first author, an African-American female Ph.D. candidate who is age matched to the study participants, and is similar to the study participants’ gender, ethnic background, and socioeconomic status. Borrowing from ethnographic research methods, the author had established a prior relationship with at least one participant in each focus group before the start of the study. This participant became a key study informant, and assisted the researcher in identifying volunteers for the study using friendship networks of the key informant. Using this network sampling strategy aided the researcher in gaining trust from the participants, as well as fostering an environment of openness, which is necessary for holding focus groups examining critical and sensitive topics (Bernard, 2011). The use of key study informant is a well-established tool for gathering participants to discuss sensitive issues. The
participants were aware that the researcher was seeking to gather information on the experiences of dating and sexual relationships among women in their demographic for the purposes of a research study.

The focus group session was conducted in the conference room of a private facility that agreed to allow the researcher to utilize the space for the study. There were no other individuals present in the conference room besides the researcher and participants. All participants were given the Pennsylvania State University IRB-approved consent forms which were reviewed and summarized at the start of the focus group session. Matters of confidentiality were explained, with particular attention given to the importance of respecting the identity and sensitive information shared by other participants outside of the focus group session. Participants were asked to assume pseudonyms for themselves in the focus group, to allow for anonymity. Each focus group session lasted 60-90 minutes, and the questionnaires took about 10 minutes to complete. At the conclusion of the session, participants were provided information about psychological counseling and HIV testing services in the Chicago area. Each participant was paid $25 for their time and participation in the study.

Data Analysis

Digital audio recordings of the focus group sessions were transcribed verbatim, and the participants’ assumed pseudonyms were used as identifiers. Transcripts were loaded into the qualitative analysis software, NVivo for coding and analysis. Codes are labels for qualitative data; such as segmented sentences, or paragraphs used to organize and identify themes (Creswell, 2003). Focus group transcripts were analyzed using the process of content analysis (Field & Morse, 1985; Graneheim and Lundman, 2004) to identify emerging themes. Memoing was also used concurrently throughout the processes of data collection and data analysis (Glaser, 1978; Birks, Chapman, & Francis, 2008). First, deductive codes were identified based on the literature as well as possible cultural factors of interest for this study, and inductive codes were assigned as new themes were revealed from participant responses (Glaser, 1978; Eto & Kyngäs, 2008). Categories were outlined under which subcategories were
constructed. Participants’ responses were matched with these subcategories and the constant comparison method was used until saturation was achieved and no additional categories were revealed. This method is considered acceptable with a small sample size (Glaser, 1978). Theoretical codes were identified. Themes emerging from the codes were determined by examining several factors, including codes with the highest frequencies and pervasiveness of codes throughout the dataset. Analysis was an iterative process, reviewing coded text related to the research question, and re-reading all transcripts. The Cultural Empowerment domain of the PEN-3 Cultural Model (Airhihenbuwa, 1989, 2007) was then used to guide the organization of the categories by identifying the positive, existential (unique), and negative aspects of the cultural themes emerging. Representative quotes illustrating the emergent themes were selected, and are presented in the Results/Discussion section.

The co-investigator was debriefed after each focus group session. All categories, subcategories, theoretical codes, and emergent themes were developed with the agreement of the primary and co-investigator. Where differences in interpretation occurred, the primary and co-investigator reached agreement after clarifying differences in interpretation. Though this study had a relatively small sample size, in qualitative and focus group research, appropriate sample size is considered attained when saturation has been achieved (Strauss & Corbin, 1998). This was achieved with our total sample of 10 participants.

Member checks were not conducted after the focus group sessions. Rather, in the midst of the sessions, the researcher used a continuous process of requesting verification of her understanding of statements made by participants to ensure that their intended meaning was conveyed. This method of verification has been cited as perhaps more useful than the process of returning results to the participants for verification after data analysis, as the latter process of member checking may actually invalidate the data whereby the goal in focus group data analysis is to synthesize responses across individuals instead of representing individual concerns (Guba & Lincoln, 1981).
RESULTS and DISCUSSION

This pilot study was conducted to explore the contextual factors associated with sexual risk behavior among a sample of 10 college-educated African-American women between the ages of 25-34; a group that is understudied, since they encounter unique experiences with regard to dating, partner selection, and increased HIV risk. The women in this study were well-educated as six of the participants had completed college, and four completed graduate school. Relationship status and type varied among the women. Five of the participants were currently involved in relationships, while the other 5 were not. Of those involved in relationships, one described her relationship as a “casual sexual relationship, I would like to keep it casual.” Another participant described her relationship as a “casual sexual relationship, but I would like for it to be more.” One participant described her relationship as “boyfriend/romantic partner.” Four participants characterized their relationships as “serious relationship, feel certain we will stay together long-term.” All participants said that they hoped to marry in the future. One participant reported that she either knew or assumed that her sexual partner also had other current sexual partners. All 10 participants had high scores (Mean=11.5, SD=.707) on the HIV knowledge scale of the questionnaire where 13 was the maximum score, indicating that they were knowledgeable of the ways that HIV can be transmitted.

Through analysis utilizing the PEN-3 Cultural Model, four themes emerged. These themes included participants’ perceptions about: Limited pool of available male partners, Pressure to get married, Feelings of competition among women for male partners, and Men’s negotiating power in relationships. Table 1.1 contains sample quotes representing each theme as they fall under relevant domains of the PEN-3 Model.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Positive</th>
<th>Existential</th>
<th>Negative</th>
</tr>
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<tbody>
<tr>
<td><strong>Limited Pool of Available Male Partners</strong></td>
<td>“The one I’m with now… It’s totally amazing… He does not have a degree… I have a master’s degree, but we work WELL.”</td>
<td>“I have a problem finding a guy that’s on my level or better, and I say that to mean that is a professional…”</td>
<td>“I think it’s hard to find a Black man who actually works, goes to school, who’s doing something with himself, because he’s already taken.”</td>
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<tr>
<td><strong>Pressure to Get Married</strong></td>
<td>“My mom raised me as an independent person. She didn’t structure, ‘Oh you need to get married…”</td>
<td>“I think that at a certain age some women are like, ‘Okay, I’m 31. I’m ready to be married. I’m ready to have kids.’ So these are the things that they’re looking for.”</td>
<td>“I have some friends that will meet a guy, and they’re already planning a wedding. Well, you just met him! Don’t you want to see what happens?”</td>
</tr>
<tr>
<td><strong>Competition Among Women for Male Partners</strong></td>
<td>Nowadays, the younger chicks are doing EVERYTHING for these men. When they come across a woman, who is in her late twenties or early thirties, and has got it all together… she is well-educated… then he doesn’t know what to do! He’s like, “Oh my God, you have expectations?”</td>
<td></td>
<td>“You’ve got a lot of women…that will let anything go because they think that they need to do whatever they can to hook SOMEbody because there’s so much competition out here, and such slim pickings.”</td>
</tr>
<tr>
<td><strong>Men’s Negotiating Power in Relationships</strong></td>
<td>“Of course they’ll find someone else who’ll have unprotected with them. Yeah! But, I wouldn’t put that pressure on myself.”</td>
<td>“A lot of these girls ARE out here raw doggin these guys, and they feel like the women like us who are like, ‘Oh, you’ve got to put a condom on’… They can get the raw sex from somebody else.”</td>
<td>“If you don’t do it, someone else will.”</td>
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**Emergent Themes**

**Limited Pool of Available Male Partners**

Limited availability of heterosexual male partners has been cited as a significant predictor of HIV-risk behavior, particularly for African-American women (Wyatt, 1997). African-American men who
have been economically marginalized may be less appealing as potential romantic partners to women (Tucker & Mitchell-Kernan, 1995), which may be further narrowing the pool of ideal partners and further exacerbating the gender-ratio imbalance as it relates to partner availability in the African-American community, specifically for African-American women who are college-educated and do not fall into the “low-income” category seeking male partners with similar socioeconomic characteristics. Participants in this study shared their perceptions and beliefs about the gender-ratio imbalance in the African-American community, and their experiences in finding suitable male partners with whom they could form romantic partnerships. As shown in these quotes, there is a perception that the shortage is relative and not absolute.

Lisa: I think it’s hard to find a Black man who works, goes to school, who’s doing something with himself... He’s already taken. I feel that it’s hard to find a DECENT Black man. Of course, there are Black men available, but you know, you just don’t want to talk to the guy who works the corner every day, or the guy who just sits around and waits for someone to take care of him.

Stephanie: I’d have to agree, and say that there is not a shortage of Black men, but in the quality and type of Black man that you get in dating.

Brooke: Contrary to what a lot of people say, I don’t have a problem finding a guy who’s single with no kids. I have a problem finding a guy that’s on my level or better, and I say that to mean- that is a professional, that doesn’t live with his parents, that doesn’t depend on someone else to support him, so for me that’s the problem that I have with dating guys.

Angela: Some things that I’ve observed is, as professional women, oftentimes guys feel like they aren’t in a place where they’ve reached their level of professionalism, so they look at you like, “Well you know, you are where you want to be, but I’m not there yet. I’m not ready to support a family yet...” or something of that nature.

Emily: I don’t know where they are... I don’t see them, unless they’re there with someone else, and that’s not helping me in my situation... Where I work, it’s predominately white. The few African-American men that were in my area are gone.
The other one is married (someone else says, “The ONE”), right, the ONE (laughs), and I mean, and you see a SPRINKLE around, and I do work in a university that’s attached to a hospital, so you know, Hey! But you see a sprinkle.

Brooke: Look at all of us... I assume we’re all in our 30’s, no kids, probably have our own places. We aren’t looking for someone to quote “save” us. Okay, the problem is there’s a whoooole lot of other women like us out there, women that have got it going on. I don’t know the stats, but I’d say for every ten guys, there may be one or two that are worthy, that are mature and grounded, and aren’t jerks, and... that sucks.

Sara: There’s so many African-American males, either they are not successful in their profession, they’re not doing anything, or they have 5 kids, and or they’re gay, or they’re in jail.

_Pressure to Get Married_

The US Census Bureau reports that in 2008, of African-American women between the ages of 25-34, 47% had never been married (U.S. Census Bureau, 2009). It is likely that most women in this group are in pursuit of fulfilling traditional gender roles, and eager to secure a marriageable partner with whom they can start a family. The limited availability of “marriageable” heterosexual African-American men in the community may make this goal difficult to achieve, particularly for college-educated women who are also seeking college-educated men. Participants shared a diversity of experiences on this topic.

Sara: My mom raised me as an independent person. She didn’t structure, “Oh you need to get married. You need to do this.” It was kind of like, “Have fun. Do what you need to get done. Make sure that you’re happy. Get a good job. Get your education... Get your own. Do for yourself.” So, at a certain age... you’re kind of like, “Mmmm”. You get tired of it, and you kind of fancy the notion of, “Marriage... I wonder what that would be like.”

Angela: I think that at a certain age some women are like, “Okay, now I’m ready for that family...” I think that society often plays a role in that... because you’re like, “Okay, I’m 31. I’m ready to be married. I’m ready to have kids.” So these are the things that
they’re looking for, and then they don’t find it, and then they’re discouraged... I have some friends that will meet a guy, and they’re already planning a wedding. “Well, you just met him! Don’t you want to see what happens?”

Stephanie: My father... If I had to say there’s a model man in what I am looking for, it would be him... He’s like, “Why aren’t you married? You’re getting old. You know, how come you don’t even have a boyfriend?” And I have to tell him, “They don’t make ‘em like you anymore.” That’s what I tell him, so, yeah, once again, it’s the quality.

Milania: I just believe that as a society, it’s not like back in the day. I’m talking about 60’s, 50’s, and before that. Getting married was... You get married at 18... Family was the #1 thing. For a man; you get a job, and you get you a wife. It’s not like that anymore.

Feelings of Competition among Women for Male Partners

A limited pool of potential partners may create competition among women for those African-American men who are economically stable and interested in making marital and family commitments (Wyatt, Forge, & Guthrie, 1998). We highlight statements made by focus group participants about the competition for male partners, and the nuances of dating experiences in the African-American community that either promote or hinder the ability to form romantic partnerships, create relationship stability, and advocate for safer sex practices. A recurring theme to note was participants expressing that they felt that in the African-American community men have more options for dating than women, which creates a situation where those women who have higher standards and expectations for men feel that they are in competition with women who make less demands on male partners.

Lisa: So I think there is a bit of competing between women, friends, cousins, whatever. Cuz you know, hey, everybody wants someone in their life, so I mean, why not? It’s not necessarily right.
Paige: Black men will go out and date every race out there (group agrees). You know, and if anyone in here is 25, I’m sorry, but these young chicks... are REALLY making it harder for the older women, because they’re doing anything and everything at the drop of a dime without them being courted, without them even having to take them out to dinner.

Milania: It should be the man who is courting the woman. When did we get away from the man courting the woman? That’s a problem. And the thing is that, women start settling for less, and that’s why we expect less, and that’s why men start doing less. (group agrees)

Lisa: Well, I know I’ve been left for other people. I notice I tend to just drive men away because I’m quote, unquote a nag, or I expect too much.

Milania: Nowadays, the younger chicks are doing EVERYTHING for these men: letting them lay on their couch, taking care of them, getting those checks, going out working, and basically these men don’t have to do anything. So when they come across a WOMAN, who is in her late twenties or early thirties, and has got it all together, with no children, her own place, and even if she stays with her parents, but you know, she is well-educated, moving up the corporate chain and things in the world, then he doesn’t know what to do! He’s like, “Oh my God, you have expectations? What, you don’t want children until you get married?!”

-Men’s Negotiating Power in Relationships-

African-American men in high demand by African-American women have more power to negotiate the types of relationships that they desire because of their limited availability. It has been suggested that the more power available to men in heterosexual relationships, the greater likelihood that women will have poor health outcomes (Wingood, et al., 2000). Men who engage in concurrent partnerships may be less likely to concede to the demands of their female partners as they may feel confident that the woman will be hesitant to jeopardize the status of the relationship because they are aware that primary relationships are difficult to secure in the African-American community (Thomas & Thomas, 1999). It may be the case that women who
are trying to secure or maintain intimate relationships while contending with the gender ratio imbalance may relinquish negotiating power in their relationships to their men, be more likely to settle for less desirable partners, accept infidelity, and agree to engage in unprotected sex (L. Bowleg, 2004). Here participants share thoughts about experiences with males who are unlikely to concede to demands within the relationship.

Brooke: I wish I’d brought my one friend to this conversation... She’s a person who dates a guy who is successful and all of that... but this dude PLAYS her as much as possible, and she stays going back, and she’s a pretty girl, and has the potential to have all of her stuff together when she’s ready to.

Milania: The guys know that there’s a shortage of them... Somebody like Sarah or Paige, women who know their worth can come to a guy and be like, “You’ve got to come to me in a certain way, or it isn’t gonna happen.” But you’ve got a lot of women... not just the young ones either, that will let anything go because they think that they need to do whatever they can to hook SOMEbody because there’s so much competition out here, and such slim pickings.

Brooke: You’ve got guys that are in their 30’s, no children, have a house, have a car... They KNOW, they KNOW they’re the hot commodity. I (dated) three attorneys. Loved them to death. They were FIIIINE, but they were a-holes. Know why? Because they didn’t need me, and they knew it. And I knew it too!... Of course it didn’t work out because I don’t have to tolerate that.

As our focus group participants discussed the ways in which African-American men are facing less pressure to concede to certain demands from African-American women, the topic of concurrent partnerships entered the conversation. A concurrent partnership can be defined as multiple simultaneous sexual relationships, or sexual relationships that overlap in time (Morris, Kurth, Hamilton, Moody, & Wakefield, 2009). In contrast to Whites, African-Americans with few sex partners are more likely to be sexually involved with partners who are also involved in concurrent partnerships (Laumann & Youm, 1999). Concurrent partnerships have been cited as drivers of STI and HIV infection within communities
(Adimora, et al., 2002; Adimora, Schoenbach, & Doherty, 2006; Adimora, et al., 2003). Focus group participants shared their thoughts about and experiences with concurrent partnerships.

The following is an exchange between two members of Focus Group 2 on the topic of being involved in concurrent partnerships.

Sara: I’ve never experienced any type of relationship, friend-lationship where I wasn’t... you know where they had so many choices that I was number 2, 3, 4, 5 because I just never accepted that. I can’t relate to a man having so many other choices that I felt like, “What about me?”

Paige: Unknowingly

Sara: What?

Paige: Unknowingly... (group agrees)

Sara: I mean, unknowingly, right... I mean, you can go by why mistresses do what they do, but they probably KNOWINGLY know that they’re not number one, but if you TREAT me like I’m a priority... I would never be in a relationship with somebody if I’m not top priority, just period. So, I’m not going to say “unknowingly” because if you’re SHOWING me that you’re trying to spend time with me at all times, that’s all I know.

In this exchange on willingly engaging in a relationship where the male has other partners, Paige went on to talk about a male friend that has other partners although he is engaged to be married. She uses this story to illustrate her point about women thinking that they are in monogamous relationships while their partners are actually maintaining concurrent partnerships.

Paige: I have a male friend that I talk to EVERY day. He has a fiancée, living with her, 3 kids! And you think that this woman is #1, but every time I turn around, you’re out here on a date with someone else, and this is your fiancée! And treating these other women like they are #1!

The following are additional thoughts and experiences shared by participants regarding romantic and sexual relationships in the African-American community.
Lisa: I feel like a lot of black women, we wind up settling because a good man IS hard to find. So, a lot of us we feel, “Well I can’t find someone that’s good, I’ll find someone that’s good enough, or I’ll MAKE him good.”

Stephanie: I think it’s because they have more options, and okay let’s say you’re out of college, and you’re in different areas, they can spread it around. “So I can date this girl here, and this chick is in another dorm. Man she can be in the other state or in the other suburb, and I can do what I want!

Lisa: To me, once again, it just goes back to us settling. They have these options because we give them the option to do that. Women messing with married men, or who they know are in serious relationships instead of going to find someone who IS single. They’d rather just settle for someone who’s paying them attention... It doesn’t matter if he has this girl or that girl, or if he’s married.

Brooke: I’ve never felt like I was a number to a guy per se. I mean, in the situations where I’ve been dating multiple men, I’ve never cared if the guys were dating other chicks because I mean, like everybody knew what was up.

Lisa: I can’t just have casual relationships with men. I have friends and relatives who can, and it might work for them. For some women it works.

Focus group participants also shared their views about the importance of pleasing their partners sexually. This could in some cases have implications for sexual risk taking. While these responses have more to do with the women’s negotiating power in sexual relationships, their responses often carried an undercurrent of the aforementioned theme of Feelings of competition among women for male partners.

Milania: You should be doing cartwheels for your man. You should be p-popping on a hand stand. Cuz that’s YOUR man. Why wouldn’t you? Because there is that... “If you don’t do it, someone else will.”
Paige: I don’t understand why any woman WOULDN’T be doing that with their man. It’s not an audition. It’s- you need to get down and do what you need to do with your man. That’s your man. Period. You better make sure you gave him something to think about that will make him return RIGHT BACK HOME.

Milania: Sex IS a HUGE part of the relationship. So is communication and actually getting to know each other, but sex is at the end of the day a HUGE part of the relationship. It’s not what it’s BASED on, because you’re not banging 24/7. There’s girls that are ready to... there’s no competition... but women ARE sitting in the background waiting for you to fail because they don't have what you may have... They’re like, “Let me do what she won’t do.”

Paige: You’ve got to keep different types of things coming into that bedroom in order to keep your man from getting it from somewhere else or straying away.... Hey, role play, go get you some toys, yeah, in the bedroom. I’m serious, because like she said, what you won’t do, the next chick will.

Milania: But that’s what porn is for too... It’s about knowing your sexual self. I’m Catholic, but that’s what porn is for. You learn things! I like to use it as a learning tool.

Previous studies investigating African-American women’s condom use behavior found that men have the most decision-making power when it comes to whether or not condoms will be used, and that women must often negotiate persuading partners to engage in this safer sex practice, decide whether or not they will refuse to have sex without a condom, or engage in unprotected sex even when they have concerns about HIV risk (L. Bowleg, Lucas, & Tschann, 2004). When asked, “Have you ever felt that if you did not have unprotected sex with your partner that he would find someone else who would?” Some participants gave the following responses.

Lisa: Of course they’ll find someone else (laughs) who’ll have unprotected sex with them (group laughs). Yeah! (laughs) But I wouldn’t put that pressure on myself. Of course I have unprotected sex. I have a child. But, I’ve never been in a situation where
someone was like, “Well, if you don’t do it, I’m gonna leave you.” But I know that of course there’s someone that he’s going to, or has already... to have unprotected sex with.

Stephanie: No, it’s what I wanted to do!

Milania: A lot of these girls ARE out here raw doggin these guys, and they feel like the women like us who are like, “Oh you’ve got to put a condom on”... they can get the raw sex from somebody else.

Our focus group participants also shared various thoughts and experiences regarding engaging in sexual intercourse without condoms.

Shaun: I don’t feel like I have to impress him more because I’m worried about what he’s going to do when I leave the bedroom or when I leave his presence. It’s about trusting him, and he’s trusting me.

Emily: When he gets in the bed with me, we’ve already taken tests. We’ve already discussed everything, and he already knows this is gonna be wonderful anyway because he even got to this point.

Shaun: I just asked him why he thought we could have unprotected sex, and I made sure they got all their stuff. I want your lab reports actually. I’ve got to look them over. I’m a nurse. Make sure they’re okay.

Brooke: Lab reports... That did something for me. I had a guy that wanted to do it raw, and I was like, “No, I need to see your results.” Like, I’m very vocal with dudes. I’ll be like, “Well, I’m going to the gynecologist today, and my blood work better come back straight. You know, we better not have a problem.” And I tell whoever I’m messing with, “Well, results came back. I’m all good. What’s up with you?”
Shaun: The one guy that told me that, “Well Shaun, I figure you know, I know how to pull out.” I said, “Pulling out does not mean that your semen has not already come inside my vagina… Do you have allergies to latex? What’s going on?” And he’s like, “Nah, I always pull out with my women.” I said, “Well this one you ain’t pullin out of. So, take me home. Have a good night.”

Milania: Until that day comes when I decide to say we’re ready, or we’re prepared to have… to give life, there is no unprotected sex. I don’t know what that means. We’re using condoms, and that’s it… Just to be in a relationship? There is no such thing as unprotected sex.

The four emergent themes allow us to better understand heterosexual relationship dynamics occurring within the African-American community that may be indirectly increasing behavioral risk for HIV infection among women ages 25-34, a group whose fourth leading cause of death at present is HIV/AIDS (CDC, 2012). To maintain consistency with the PEN-3 Model, the positive aspects of the various themes are presented first for discussion, followed by those that are existential (or unique), concluding with the negative.

Positive

Some women in the focus group reported that though they often found it difficult to identify high quality potential male partners, they were able to reconsider definitions of quality to extend beyond socioeconomic factors such as educational attainment and income level which widened their pool of potential partners. They were able to establish partnerships with African-American males when they did not focus on partnering with men that met the standard definition of “high quality” which often implies college education attainment, and stable employment. Partner selection strategies like these appear to be beneficial for these women, and may reduce some of the negative experiences that college-educated African-American women commonly report as a result of the gender-ratio imbalance. To our knowledge, mate quality related to sexual partner selection has not been explored in the research on HIV risk among
African-Americans. It is therefore suggested that future studies investigate the possible relationships between quality and partner selection and HIV risk.

Some women also noted that they were able to make certain demands and were unwilling to settle for treatment in their romantic relationships that fell below their standards. This included refusal to maintain relationships with men whom they were aware had other romantic partners. Some participants also shared that they did not feel reluctant to demand consistent condom use and HIV testing.

Two focus group participants shared that they demand to see their partner’s HIV test results before engaging in unprotected sex. Statements like these are encouraging, yet still concerning when we consider the high rates of partner concurrency within the African-American community (Adimora, et al., 2002; Adimora, et al., 2006), and the 3-6 month window period of HIV virus detection where tests may give false negative results. However, some of the study participants reported confidence that their relationships were mutually monogamous, which would decrease their risk for HIV infection.

Additionally, some participants reported that they were currently involved in relationships characterized by mutual trust and monogamy. Several focus group participants shared accounts demonstrating that they had high knowledge of sexual health and protective behaviors, as well as high levels of sexual self-efficacy and assertiveness, whereby they were effectively able to negotiate safer sex practices.

Existential

With regard to the existential aspects of the emergent themes in this study, some focus group participants reported that given the unique dynamics characterizing many African-American heterosexual relationships over the years, they were not encouraged from an early age to adopt the typical gender socialization strategies that are common in traditional mainstream U.S. culture where the goal is for women to find a male partner for marriage and childbearing. These women shared that they were encouraged instead to focus on their own educational and career development, and to not position themselves where they may be reliant on partnerships with African-American males because they can be
so difficult to establish or maintain. This type of socialization for African-American females is adaptive and has been somewhat common over the past few decades, (Hill Collins, 1986) but may also serve as a potential impediment for women who still choose to seek romantic partnerships in a context where African-American men are making the same educational and career strides in fewer numbers. As participants mentioned, this creates a situation where African-American men are in a position of advantage when it comes to partner selection because there are more women of high quality (as defined by educational and career achievement) than there are men, which creates a dynamic where the men are in high demand, and they have many women from which to choose.

Participants also shared that being in this specific age group (25-34 years) presents an added stressor which is unique within this context with regard to finding suitable partners and securing stable relationships, because though as young women they had been encouraged to invest in their own success as a priority, women of this age group are still culturally expected to be moving toward marriage and childbearing, and are often questioned about their lack of romantic partnership. This has the potential to present a stronger motivator to establish romantic relationships, or to maintain current ones, which may or may not be advantageous in terms of psychological health or physical health, as African-American women facing these unique circumstances within the context of gender-ratio imbalance may be less likely to object to behaviors that increase their risk for HIV because they perceive that their chances for finding another suitable partner may be low (L. Bowleg, et al., 2004). This context is unique to college-educated African-American women specifically, as they are challenged to identify male partners in a pool that is already narrowed by an unbalanced ratio of women to men, but further narrowed with respect to the number of men who are college educated and well-employed.

Negative

In the case of negative aspects associated with the emergent themes, the gender-ratio imbalance was cited several times as a factor that negatively impacts their prospects for partnering, as well as
complicating their ability to maintain stable romantic partnerships once they are established. Settling for undesirable interaction with male partners, increased likelihood of concurrent partnerships, and increased sexual risk-taking were all mentioned as being associated with the gender-ratio imbalance. Perception of a limited availability of male partners was the most apparent theme in the focus group discussions, and seemed to be a common thread throughout all of the emergent themes.

**Implications for Future Research**

Many participants expressed that they felt it difficult for college-educated African-American women to identify male partners who have similar socioeconomic features with respect to education and income level, which creates a sense of competition among women for these men, and creates less of a demand for men to concede to the standards and demands of women. This can have implications for concurrent partnerships and condom use. While some women reported that they used condoms consistently, not all did, and one respondent noted that it is likely that there is far more unprotected sex occurring than was reported in the group, as was evidenced in the anonymous pen-and-paper questionnaire responses where when participants were asked whether or not they used a condom the last time they had sex, 3 responded “yes”, and 7 responded “no.”

It is also important to note that one participant did state in the focus group session that having unprotected sex was what she wanted to do. This is an often ignored dimension of non-condom use in women. It is the case that some women actually prefer to not use condoms, and this may not necessarily be a function of their desire to please their partners. Diminished pleasure and sensitivity has been cited as a reason that women choose to forego condom use (L. Bowleg, et al., 2004), as well as disruption of intimacy, which was also reported as a reason in the anonymous questionnaire in this study. However, it may also be the case that some women’s non-condom use has deeper psychological meanings, as some women may anticipate that unprotected sex will offer a deeper connection to their partner through physical intimacy (Jones, 2006), or provide a sense of monogamy, even if that is not actually the case, as
prior studies have reported that it is often assumed that even if men have other partners, they will use condoms with the casual partners, but have unprotected sex with their main partners (Carey, Senn, Seward, & Vanable, 2010)

All study participants had high scores on the HIV knowledge scale portion of the pen-and-paper questionnaire. This is considered a positive finding, but does raise questions about the assumed relationships between knowledge and action when we juxtapose this finding against participants responses to the question “Do you always use a condom with your partner?” where 2 participants responded “yes”, and 8 responded “no”. We found that this group of women, with higher HIV education levels commensurate with their academic education level, do not also exhibit high levels of consistent protective behaviors against HIV infection. These findings reinforce what has been concluded in many other studies, that knowledge may not be a salient variable predicting individual behavior, and thus interventions that seek to increase knowledge may not be the way forward in addressing HIV risk for this subpopulation.

The topic of fear of losing partners to other women as a result of not sexually satisfying their male partners was mentioned in a number of participant responses. This may imply that male partner’s desires for sexual satisfaction may in some cases outweigh health protective behaviors when it comes to sexual decision-making for women operating within this context. This is a topic worthy of further qualitative study, as it may be an unexplored motivator for non-condom use and other risky sexual behavior in this specific group of women within the context of gender-ratio imbalance. It may be more advantageous to explore this type of question in a one-on-one in-depth interview or anonymous survey as women may be more likely to share information on feelings of vulnerability and admit to unsafe sexual practices in these formats than in a group setting. This is a possible limitation of our study as evidenced in the data that we have presented where not many women openly admitted to having unprotected sex in our focus group session, but the majority of participants reported non-condom use in the anonymous pen-and-paper questionnaire. It is possible that the open and adamant objections to unprotected sex, as well as
the statements regarding intolerance of concurrent partnerships made by some group members may have caused other participants to be reluctant to share and discuss their experiences that could be considered unfavorable in the group setting. While it appeared that focus group members felt comfortable in the group session, as evidenced by their congenial interactions it is possible that not all participants felt comfortable sharing their more negative experiences within the context of the gender-ratio imbalance that might add more to our analysis of the subject. Another limitation of our study is that we did not over-recruit, so our sample size was low and all of our participants lived in the Chicago, Illinois metropolitan area. This limits the generalizability of our findings to African-American women in other areas and settings. However, we were still able to gather important and useful information about women of this demographic. Future studies should recruit participants from other U.S. neighborhoods and cities.

Some participants made statements that exhibited high levels of sexual health knowledge and protective behavior practices, but some noted that their male partners often had low levels of knowledge in these areas, and held misconceptions about the level of risk that their behaviors exposed them to. This can certainly present negative implications for women’s health, where the low sexual health knowledge and high risk behavior of their male partners could put them at increased risk for HIV infection if condoms are not used at every sex act. It is important to note that the women in this study who reported that their male partners exhibited low HIV knowledge, also shared that they negotiated their HIV risk by choosing to not have unprotected sex with those males. This type of negotiation strategy may be different from the risk behavior and negotiation practices of their lower-income/lower-educated African-American female counterparts.

While some women shared that they used condoms consistently, not all did, and one respondent noted that it is likely that there is far more unprotected sex occurring than is reported. This has implications for practice as HIV prevention for women of this sub-group should be designed as context-based interventions, where women who already possess some level of agency are empowered to help their partners achieve the same or increased level of awareness of HIV risk, safer-sex practices, and HIV
testing in a way that would not threaten the security of their romantic partnerships. Participants in the study shared experiences which demonstrate that these women broadly exhibit agency in their romantic and sexual relationships, as demonstrated by their ability to initiate conversations around condom use and HIV risk with partners. This is encouraging, as agency is less often identified in research concerning African-American women negotiating sexual risk. This highlights the need for more research examining within-group differences among African-Americans to better identify points-of-entry for intervention and health promotion.

CONCLUSION

Our findings extend the scope of analysis for women of this demographic as researchers attempt to design intervention programs that might reduce HIV infection rates in the African-American community. This context of gender-ratio imbalance appears to contribute to a perception of limited availability of male partners, shaping relationship dynamics among African-American heterosexual couples, while creating additional challenges for college-educated African-American women in the 25-34 age group. While the good news is that these women appear to be highly knowledgeable about matters of HIV risk and sexual health in general, they may be less informed about their unique risks as influenced by the gender-ratio imbalance that exists, which is reflected in their low adherence to HIV protective behaviors such as consistent condom use. It is obvious that these women are at least concerned about HIV risk, the challenge then is to work toward increasing their protective behaviors as well. Future interventions should take a context-based approach by not relying only on the high levels of HIV risk knowledge already noted in this group, but rather considering also the unique contextual risk factors resulting from race, age, gender, and achievement level in an effort to increase their perceived susceptibility, which may increase their protective behaviors.
REFERENCES


APPENDIX A

A. Focus Group Guide

1. Do you feel that “a good man is hard to find”?
2. Do you feel that it is difficult to find a suitable male partner?
3. Do you believe that there is a shortage of datable men in the African-American community?
4. Do you feel that there is competition amongst African-American women for African-American men?
5. Do you feel that the shortage of African-American males impacts romantic relationships in the African-American community?
6. Have you ever felt reluctant to leave your male partner because you felt that it would be hard to find another?
7. Do you think that you have ever accepted things in your relationships that you would not have if there were more available men in the dating pool?
8. Do you feel that the male shortage impacts your sexual relationships?
9. Have you ever stayed with a male partner when you were aware that he had other sexual partners?
10. Have you ever felt pressured (whether explicitly stated or not) to do things sexually that you were not comfortable with in a romantic relationship in order to keep your partner?
11. Have you ever felt that a partner left you or had other partners because you were not sexually satisfying him?
12. Have you ever felt that if you did not have unprotected sex with your partner that he would find someone else who would?
13. Do you think that it is likely that you will remain single in your life?
APPENDIX B

Questionnaire

1. How old are you? ______

2. In terms of ethnic group, what do you consider yourself? ________________________

3. Do you have a strong sense of attachment to your ethnic group? ___Yes ___No

4. RELATIONSHIP STATUS-  Are you now: (Please circle one, and read responses)

   Single.................................................................................................................................1
   a) Are you currently in a relationship? Yes___ No___
   b) If yes, how long have you been in this relationship? _______

   Married............................................................................................................................2
   c) How long have you been married? ___________

   Separated.........................................................................................................................3
   d) Are you in another relationship at this time? Yes___ No___
   e) If yes, how long have you been in this relationship? _______

   Divorced..........................................................................................................................4
   f) Are you in another relationship at this time? Yes___ No___
   g) If yes, how long have you been in this relationship? _______

5. FUTURE RELATIONSHIP PLANS

   If you are not currently married, do you hope to marry/re-marry in the future?  
   Yes___ No___

6. LIVING SITUATION

   Where do you currently live? (Circle One)

   Your own house or apartment.......................................................................................1
   Your parents’ house or apartment................................................................................2
   Other relative or friend’s house or apartment.................................................................3
   With your boyfriend in their apartment.........................................................................4
   Other, please specify ______________________________________________________________5
7. **EDUCATION**

What is the highest level of education that you have completed?

- High School..............................................................................................................1
- College.....................................................................................................................2
- Graduate School.....................................................................................................3

8. **CAREER**

What type of work do you do?__________________________________________

9. **INCOME**

Would you say that your average yearly income is:

- Below $30,000____
- 30,000-45,000____
- 45,000-60,000____
- 60,000-75,000____
- 75,000-90,000____
- Above 90,000____

10. **FAMILY PLANNING**

A) How much do you desire to become pregnant at this time?

- I have a very strong desire......................................................................................1
- I have a strong desire..............................................................................................2
- I really don’t care....................................................................................................3
- I don’t desire to become pregnant at this time......................................................4

B) How much do you think your partner wants you to become pregnant at this time?

- Very much..............................................................................................................1
- Somewhat................................................................................................................2
- He really doesn’t care either way.........................................................................3
- He really doesn’t want me to become pregnant at this time..............................4
C) How important is it to you that you have children within the next 5 years or so?

Not at all important.................................................................1
Somewhat Important.............................................................2
Very Important........................................................................3

D) The last time you and your partner had sex, did you use a condom?

Yes___ No___

E) If No, was the reason that you did not use a condom because you yourself wanted to become pregnant?

Yes___ No___

F) Is the main reason that you use condoms to: (Circle one)

Prevent Pregnancy.....................................................................1
Prevents Getting an STD (other than HIV).................................2
Prevent Getting HIV....................................................................3

G) What type of contraceptive do you use most often? (Circle one)

None.........................................................................................1
Male Condoms............................................................................2
Female Condoms.......................................................................3
IUD.............................................................................................4
Birth Control Pill.......................................................................5
Withdrawal ("Pull Out")..............................................................6
Rhythm Method.........................................................................7
Other (please specify)...............................................................8

Why do you use this type of contraceptive method most often?

Which of the methods listed above did you use the last time that you had sex?
11. **DATING HISTORY**

A) In general, would you say that you prefer to date: (Circle One)

- African-Americans ONLY……………………………………………………………………..1
- I prefer African-Americans, but also date outside of my race………………2
- I do not have a preference when it comes to race and dating………………..3
- I do not prefer to date African-Americans……………………………………………4

B) What is the race of your most recent romantic partner? ______________

C) Was/Is your most recent romantic partner a college graduate? ___Yes ___No

D) Was/Is your most recent romantic partner employed? ___Yes ___No

E) Do you consider yourself:

- Heterosexual………………………………………………………………………………………1
- Homosexual………………………………………………………………………………………2
- Bisexual………………………………………………………………………………………………3
- Other (please specify)______________________________________4

F) In general, would you say that the people that you date are:

- Much younger than you (5 years or more)..............................1
- Younger than you (2-4 years).................................................2
- About the same age..............................................................3
- Older than you (2-4 years)...................................................4
- Much older than you (5 years or more)..............................5

12. **SEX HISTORY**

About how many men would you say you have had sex with in the past 12 months?

______________

*For the next set of questions, please refer to your most recent romantic relationship.*

A) Did/Do you use condoms with your most recent regular sex partner?

___ Yes ___ No
B) How risky do you feel the following sexual activities would be if you did them with your regular sex partner and then tell me how risky they would be with someone you've never had sex with before.

Is it:
“Not Risky” = 0
“Slightly Risky” = 1
“Very Risky” = 2

<table>
<thead>
<tr>
<th>Category 1: Your regular Sex partner</th>
<th>Category 2: Someone you’ve never had sex with before</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Vaginal sex without a condom</td>
<td>0 1 2</td>
</tr>
<tr>
<td>b) Vaginal sex with a condom</td>
<td>0 1 2</td>
</tr>
<tr>
<td>c) Vaginal sex where the man pulls out his penis before he ejaculates</td>
<td>0 1 2</td>
</tr>
</tbody>
</table>

C) During the past 2 months how often have you and your regular partner discussed the following...
1. “Never” 4. “Between six and nine times”
2. “Once” 5. “Ten or more times”
3. “Between two and five times”

   ___ a. Pregnancy ___ e. Your partner’s sex history
   ___ b. Using Condoms ___ f. Your partner’s drug history
   ___ c. HIV/AIDS ___ g. What is sexually satisfying to you
   ___ d. STDs ___ h. What is sexually satisfying to your partner

D) How long had you been dating your most recent regular sex partner before you both first talked about using condoms? (Circle one)

Never talked about condoms..................................................................................1
When you first started dating, before having sex..................................................2
Moments before you had sex for the first time with him.........................................3
After you had sex between two and five times.......................................................4
After you had sex six or more times.........................................................................5
E) Please tell me the 3 main reasons why you hesitate to talk to your most recent regular sex partner about using condoms. Please put a “1” next to your top reason, “2” next to your second choice, and “3” next to your third.

___ I am on some other type of birth control.
___ There aren’t any condoms available.
___ I have never asked a regular sex partner to use a condom before.
___ I don’t know what to say.
___ I don’t think my regular partner likes using condoms.
___ I don’t like using condoms.
___ My regular sex partner may think that I don’t trust him.
___ I trust my regular sex partner.
___ He will verbally abuse me.
___ He won’t trust me if I ask him to use condoms.
___ He will probably leave me.
___ He always uses a condom on his own.
___ Other (Please specify)______________________________________________

F) Have you ever had to ask your most recent regular sex partner to use a condom?
   ___ Yes           ___ No

G) The first time that you did use a condom with your most recent sex partner, who suggested it?
   ___ I did        ___ He did        ___ Other (Please specify)________________________

H) How important are the following reasons for using a condom with your most recent regular sex partner?
   
   1= “Not Important”
   2= “A Little Important”
   3= “Important”
   4= “Very Important”

___ To protect yourself from HIV
___ To protect yourself from becoming pregnant
___ To protect yourself from STDs
___ Because you do not think that your partner is faithful
___ Because you want to protect your partner
I) When you ask your most recent regular sex partner to use a condom, how likely is it that he will agree to use one? (Circle One)

He always agrees (100% of the time) ......................................................................................... 1
He agrees most of the time (3 out of 4 times) ............................................................................. 2
He agrees about half of the time (2 out of 4 times) ................................................................. 3
He agrees once in a while (1 out of 4 times) ............................................................................... 4
He never agrees ......................................................................................................................... 5

J) Have you ever insisted/demanded that your primary partner use a condom?
   ___ Yes     ___ No

K) Has your most recent regular sex partner ever...
   1= “Never”
   2= “Once”
   3= “Between 2-5 times”
   4= “Between 6-9 times”
   5= “Ten or more times”

   ___ Put a condom on without saying anything
   ___ Asked why you want him to wear a condom
   ___ Insisted on not wearing a condom
   ___ Questioned your trust in him
   ___ Questioned your faithfulness to him

L) If you don’t ask your regular sex partner to use a condom before you have sex, then what are the chances that he will use a condom? (Circle one)

   There is a 100% chance ........................................................................................................... 1
   There is a 75% chance ............................................................................................................. 2
   There is a 50% chance ............................................................................................................ 3
   There is a 25% chance ............................................................................................................. 4
   There is a 0% chance ............................................................................................................... 5
M) Have you ever refused to have sex with your most recent regular sex partner because he did not want to use a condom? Yes No

13. SEXUAL PARTNER’S VIEWS

Do you think that your most recent regular sex partner...

1 = “Strongly disagrees”
2 = “Disagrees”
3 = “Agrees”
4 = “Strongly Disagrees”

a. ___ Sex does not feel good when you use a condom.
b. ___ He has control over whether or not a condom is used when you two have sex.
c. ___ He has control over the sexual activities that your two engage in.
d. ___ Condoms are an effective way to protect people from getting HIV.
e. ___ If you ask him to use a condom, you are being unfaithful.
f. ___ He can talk you out of wanting him to use a condom.
g. ___ It is too much trouble to have condoms readily accessible.
h. ___ He thinks that you do not want him to use a condom.
i. ___ Sex is more fun when a condom is used.
j. ___ If you ask him to use a condom, you are implying that he is unfaithful.
k. ___ You argue too much over using condoms.
l. ___ Putting on a condom is a hassle.
m. ___ You using a female condom is preferred over him using a male condom.

12. CONFLICT OVER CONDOMS

What are the chances that you and your most recent regular sex partner would have an argument in the following situations?

1 = “There is a 100% chance”; 2 = “There is a 75% chance”; 3 = “There is a 50% chance”; 4 = “There is a 25% chance”; 5 = “There is a 0% chance”

a. ___ If you asked him to use a condom.
b. ___ If you insisted that he use a condom.
c. ___ If you asked him how many sex partners he’s had in the past.
d. ___ If you asked him if he is having sex with someone else.
e. ___ If you refused to have sex with him unless a condom is used.
f. ___ If your partner asked you how many partners you have had.
g. ___ If your partner refused to have sex with you because you don’t like for him to use condoms.
h. ___ If your partner suggested using a condom.
i. ___ If your partner asked you to do something sexually that you didn’t want to.
13. **SEXUAL SELF-EFFICACY**

Have you ever...

1= Yes
2= No

a. ___ Refused to have sex with your partner because you weren't in the mood
b. ___ Asked your sex partner to wait while you got a condom
c. ___ Controlled your urge to have sex after drinking alcohol
d. ___ Told your partner how to treat you sexually
e. ___ Refused to engage in sex practices you didn’t like

14. **THOUGHTS ABOUT HIV**

Please share your thoughts on the following statements.

T= True
F=False
DK= Don’t Know

a. ___ Only people who look sick can spread HIV.
b. ___ Anal sex without a condom is a very risky behavior for getting HIV.
c. ___ A person can get HIV even if they have sex without a condom one time.
d. ___ Keeping in good physical condition is the best way to prevent getting HIV.
e. ___ A person can get HIV from touching or hugging someone with HIV.
f. ___ Condoms reduce the risk of getting HIV.
g. ___ Most people who have HIV quickly show signs of being sick.
h. ___ Males can easily spread HIV to females through unprotected sex.
i. ___ Females can easily spread HIV to males through unprotected sex.
j. ___ A person must have lots of different sexual partners to be at risk for HIV.
k. ___ Only people who have sex with people who are gay are at risk for HIV.
l. ___ You can get HIV from kissing.
m. ___ Women using birth control pills have a lower chance of contracting HIV.
15. **Worry**

A) Please share how much each problem has caused you to worry during the past 2 months.

0 = “Not worried”
1 = “Sometimes worried”
2 = “Often worried”
3 = “Always worried”

a. ___ That you might contract HIV.
b. ___ That you might have already contracted HIV.
c. ___ That you might get an STD.
d. ___ That your sex partner may be infected with HIV.
e. ___ That your sex partner may become infected with HIV.
f. ___ That you might get pregnant.

B) How often have you been afraid to talk to your most recent regular sex partner about using condoms because you thought that he would...

1 = “Never been afraid”
2 = “Almost never been afraid”
3 = “Sometimes afraid”
4 = “Almost always afraid”
5 = “Always afraid”

a. ___ Ignore your request
b. ___ Threaten to leave you
c. ___ Actually leave you
d. ___ He will go out with another woman

C) How often have you been afraid to talk to your most recent regular sex partner about them having other sex partners because you thought that he would...

1 = “Never been afraid”; 2 = “Almost never been afraid”; 3 = “Sometimes afraid”; 4 = “Almost always afraid”; 5 = “Always afraid”

a. ___ Ignore your concerns
b. ___ Threaten to leave you
c. ___ Actually leave you
d. ___ He will go out with another woman
D) Please answer the following questions with a yes or no...
   a. Do you suspect (or know) that your current sex partner has other sex partners?
      ___ Yes  ___ No
   b. If yes, do you use condoms every time you have sex with him?
      ___ Yes  ___ No

E) About how often would you say you have had sex without using a condom because you were hesitant to ask your partner to use one? (Circle one)
   Never......................................................................................................................1
   Rarely.....................................................................................................................2
   Sometimes...........................................................................................................3
   Often..................................................................................................................4
   Always...............................................................................................................5

F) Please answer the following questions about how you view your current regular sex partner (or how you viewed your most recent regular partner before the relationship ended).

   1= “Strongly Disagree”
   2= “Disagree”
   3= “Agree”
   4= “Strongly Agree”

   a. ___ Although the future is uncertain, I have faith that my partner will always be ready and willing to stand by my side.
   b. ___ Is it sometimes very difficult for me to feel certain that my partner will always continue to care for me.
   c. ___ I am never concerned that conflicts and tensions will seriously damage our relationship.
   d. ___ If I have an issue to bring up with my partner that I think is important, I occasionally worry that he won’t take my feelings into account.
   e. ___ I feel completely secure in facing new or difficult situations with my partner because I believe he will never let me down.
   f. ___ I occasionally find myself feeling uncomfortable with how much of my emotions and feelings I have put into our relationship because I sometimes have doubts about our relationship.
G) Please answer the following “True” (T) or “False” (F).

a. ___ I believe that there are plenty of good single Black men available for single Black women who are looking for a long-lasting relationship.
b. ___ If I were to break up with my boyfriend, I think that it would be difficult to find another Black man who is willing to commit to a relationship with me.
c. ___ It is really hard to find a good Black man now-a-days.
d. ___ Black women are in competition with other Black women for the good Black men.
e. ___ As I achieve higher status, it is increasingly difficult to find a single Black man to date.
f. ___ I prefer to date men who have similar education and economic status as me.
g. ___ I am open to dating a man who is not college-educated.
h. ___ I am open to dating a blue-collar worker.
CHAPTER 4

Paper 2

Perceived Partner Availability and Condom Use Behavior Among College-Educated African-American Women

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Abstract

The goal of this study was to investigate a possible structural and contextual influence on HIV risk behavior in African-American college educated women ages 25-34. Gender-ratio imbalance has been cited as a possible driver of the HIV epidemic in the African-American community. In this study a first-generation scale to examine perceptions of partner availability was developed for use with college-educated African-American women (Perceptions of Partner Availability Scale), and examined relationships with condom use behavior in this population. This internet-based study was conducted from October-November 2012. Participants were recruited through purposive network sampling via email and the Facebook website across the United States. Of those recruited, 262 participants met the inclusion criteria, and were asked to complete an anonymous survey on the internet. Pearson correlations were conducted to determine whether or not a significant relationship exists between Perceptions of Partner Availability and communication about sexual risk and condom use behavior in this group of women. Hierarchical Logistic Regression was also used to determine variables that may predict condom use at last sex. Future directions for HIV prevention research in African-American women are discussed.

BACKGROUND

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) is a leading cause of death for African-American women between the ages of 25 and 34 (Centers for Disease
Heterosexual contact is the most common method of HIV transmission for African-American women, accounting for 87% of HIV infection in this group (CDC, 2013). For this reason, it is important to consider the dynamics of heterosexual relationships in this community with regard to health behavior and HIV risk. Though the literature on relational and psychosocial factors contributing to higher incidence of HIV/AIDS in African-American women is limited, most of the published research focuses on low SES African-American women. Little attention has been paid to the within-group differences associated with African-American women’s HIV risk behavior. This study seeks to examine psychosocial factors that may influence risk for college-educated African-American women between ages 25-34, as these women are most likely to be in search of male partners with whom they can establish lasting relationships resulting in marriage and child-rearing (Packer-Williams, 2009).

**Gender-Ratio Imbalance**

The gender-ratio imbalance in the African-American community has been noted as a possible contributor to African-American women’s HIV risk (Wyatt, 1997; Wingood & DiClemente, 2000). While African-Americans are less likely to choose sexual partners outside of their own race (Laumann & Youm, 1999), the ratio of African-American women to men is unbalanced, with 91 males per every 100 females (U.S. Census Bureau, 2010). It has been reported that “African-Americans have the worst gender imbalance experienced since the beginning of the census” (Davis et al., 2000, 4). Unmarried, educated African-American women have expressed that they find it difficult to identify marriageable African-American male partners (Davis et al., 2000). Unfortunately, it appears that a high level of education and financial independence can result in an African-American female being considered less desirable to an African-American male partner who does not have similar credentials, leaving the educated African-American woman less likely to marry or stay married (Packer-Williams, 2009). Within the community context of a gender-ratio imbalance, the pool of potential male partners is further narrowed for these women, which provides insight regarding the difficulties they report experiencing in establishing romantic partnerships. This dynamic places African-American men in high demand, and may result in
men having more power to negotiate the type of relationships they desire because of their limited availability, privileging their decision and authority in male-female relationships.

It has been reported that the more power available to men in heterosexual relationships, the greater the likelihood that women will have poor health outcomes (Wingood & DiClemente, 2000). Women’s status as being partnered or able to establish and maintain relationships has great value for them (Amaro, 1995). The value placed on being romantically partnered may outweigh other aspects of life, such as health protection. It is not difficult to understand then that for many women, maintaining a relationship is often times privileged over personal health risk to themselves, particularly when traditional gender roles reinforce a premium on love and romantic relationships (Higgins, Hoffman, & Dworkin, 2010). In this study, we examine how perceived male partner availability may influence condom use and sexual risk behavior.

Condom Use Among African-American Women

The Centers for Disease Control (CDC) recommend the use of latex condoms for protection against transmission of the HIV virus; however, the consistent adoption of this practice has been difficult to achieve across many populations. Many African-American women do not perceive that they are at increased risk for HIV infection, although the statistics prove otherwise (Kalichman, Hunter, & Kelly, 1992). Various cultural, contextual, environmental, psychosocial, and relational factors can influence whether African-American women decide to use condoms. Situational factors such as relationship type, stage of relationship, partner, partner’s preference for condom use, or desire for pregnancy may implicate decision-making around condom use in the time of an HIV epidemic (Macaluso, Demand, Artz, & Hook, 2000; Cabral et al., 1998; St. Lawrence et al., 1998; Wingood & DiClemente, 1998).

Past studies on women’s attitudes toward male condoms suggest that African-American women may hold ambivalent views toward condoms (Sterk, Klein, & Elifson, 2004), view them as pleasure inhibiting, associated with infidelity, and interrupting intimacy (Weeks, Schensul, Williams, & Singer,
However, when asked to choose a preferred barrier method for HIV prevention, African-American women tend to prefer male condoms over female condoms (Macaluso, Deman, Artz, & Hook, 2000; Johnson et al., 1992). Past stuAfrican-American women may also be influenced by their male partners’ preferences regarding condom use (Cabral et al., 1998, St. Lawrence et al., 1998). African-American men often report preference for non-condom use, and many women perceive that their male partners do not prefer condom use during sex (Johnson et al., 1992). As such, college-educated African-American women who often have more difficulty in finding suitable male partners (Davis et al., 2000; Packer-Williams, 2009) may weigh their partner’s preferences for non-condom use more heavily in their decision-making with respect to HIV protective behavior.

METHODS

Participant Recruitment

Recruitment for this study took place October-November 2012. We used a purposive referral sampling strategy (Welch, 1975) to identify women who met the inclusion criteria of being English-speaking, unmarried, heterosexual, African-American, college-educated, and age 25-34. An Institutional Review Board (IRB) approved the recruitment script (please see Appendix A) was posted on the primary investigator’s personal Facebook page to invite participants to take the online survey. The recruitment script was also forwarded through Facebook and emailed to women who were likely to meet the inclusion criteria, and as with referral sampling, the recruitment script was forwarded to others who might be eligible and interested in participating in the survey. The recruitment script directed participants to a hyperlink for the internet survey, where the IRB approved implied consent form was provided, explaining the purpose of the study, limitations on confidentiality while utilizing internet technology, participants’ option to withdraw their participation at any time, and information about entering the optional drawing for a $100 Amazon gift card. Of those recruited, 262 participants met the inclusion criteria as listed above,
and were located in different cities across the United States (please see Appendix B for information on participant representation by state). Table 1.2 displays demographic attributes of the study participants. A graph depicting participants’ average annual gross income is found in Appendix C.

Data Collection

IRB approval for the study was obtained from the Pennsylvania State University Office of Research Protections prior to the start of data collection. There were no time restrictions on completing the internet survey. However, most participants completed the entire survey in 10-15 minutes. At the conclusion of the survey, participants were given an option to be directed to a separate website where they could enter their email address into a lottery to win a $100 Amazon gift card.

Survey Instrument

The survey instrument used was adapted from DiClemente & Wingood’s (1995) SISTA (Sisters Informing Sisters about Topics on AIDS) Project Original Evaluation Instrument, which was developed for use with young African-American women. The survey was modified based on pilot testing conducted with college-educated African-American women ages 25-34 (V.N., unpublished data, February, 2013), and also includes questions about perceptions/experience of the gender-ratio imbalance. The overall survey instrument also included demographic questions on age, income, level of education, relationship status, length of relationship, as well as questions about knowledge of HIV, participants’ HIV protective behaviors, participant and partners’ STI/HIV testing, perceived susceptibility to HIV infection, partners’ attitudes toward condom use, sexual self-efficacy, and perceptions of partner fidelity.

The Perceived Partner Availability (PPA) Scale is a first generation instrument developed by the first author to assess perceptions and experiences of limited male partner availability among unmarried, college-educated African-American women. This scale measured participants’ responses on a 5-point, Likert scale ranging from “Strongly Agree” to “Strongly Disagree.” The items in this scale were selected
based on factor analysis conducted on the original 5 items that were presented in the survey. This scale demonstrated good reliability (Cronbach’s α) at .71.

Data Analysis

After the internet survey was closed to new participants, the data were downloaded into IBM SPSS Statistics Software version 19. A Perceived Partner Availability Scale was developed using factor analysis of the survey questions addressing participants’ perceptions and experiences of limited male partner availability. Pearson correlations were generated to determine whether or not a significant relationship exists between Perceptions of Partner Availability Scale scores and communication about sexual risk and condom use behavior. Hierarchical logistic regression analysis was conducted to identify possible predictor variables for condom use at last sex among this group of women.

RESULTS

Demographic Characteristics of the Sample

The total sample included 262 self-selecting participants with representation from most of the 50 United States of America. All participants were heterosexual African-American women between ages 25-34 (M= 30.0, SD= 2.3) that had completed at least a 4-year college degree. A figure depicting average annual gross income for participants can be found in Appendix C. The majority of the sample had never been married (n= 245, 93.5%), while the rest were divorced, but currently single (n= 17, 6.5%). About half of the participants reported being currently involved in a dating relationship (n= 133, 50.8%), while the other half were not (n= 129, 49.2%). The average number of current sexual partners reported was 1 (M= 1, SD=2.2). The majority of the sample reported that they had no children of their own (n= 192, 73.3%). When asked if they hoped to marry in the future, most responded “yes” (n=241, 92%). The mean score on the HIV knowledge scale was 11 (min= 8, max=13), indicating high knowledge of how HIV is transmitted. Key demographic and behavioral characteristics of the study participants are presented in Table 1.2
Table 1.2- Key Demographic and Behavioral Characteristics of Study Participants (N=262)

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>11</td>
<td>4.2</td>
</tr>
<tr>
<td>26</td>
<td>11</td>
<td>4.2</td>
</tr>
<tr>
<td>27</td>
<td>22</td>
<td>8.4</td>
</tr>
<tr>
<td>28</td>
<td>22</td>
<td>8.4</td>
</tr>
<tr>
<td>29</td>
<td>27</td>
<td>10.3</td>
</tr>
<tr>
<td>30</td>
<td>51</td>
<td>19.5</td>
</tr>
<tr>
<td>31</td>
<td>54</td>
<td>20.6</td>
</tr>
<tr>
<td>32</td>
<td>27</td>
<td>10.3</td>
</tr>
<tr>
<td>33</td>
<td>22</td>
<td>8.4</td>
</tr>
<tr>
<td>34</td>
<td>15</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/Never Married</td>
<td>245</td>
<td>93.5</td>
</tr>
<tr>
<td>Divorced</td>
<td>17</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Neighborhood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>165</td>
<td>63.0</td>
</tr>
<tr>
<td>Suburban</td>
<td>85</td>
<td>32.4</td>
</tr>
<tr>
<td>Rural</td>
<td>12</td>
<td>4.6</td>
</tr>
<tr>
<td><strong>Highest Level of Education Completed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College (4 year/Bachelor’s Degree)</td>
<td>125</td>
<td>47.7</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>98</td>
<td>37.4</td>
</tr>
<tr>
<td>Professional Degree (JD, MD, DDS, DVM)</td>
<td>26</td>
<td>9.9</td>
</tr>
<tr>
<td>Doctoral Degree</td>
<td>13</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Preferred Race for Dating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American Only</td>
<td>101</td>
<td>39.0</td>
</tr>
<tr>
<td>African-American preferred, but date others</td>
<td>92</td>
<td>35.0</td>
</tr>
<tr>
<td>No race preference</td>
<td>64</td>
<td>24.0</td>
</tr>
<tr>
<td>Non- African-American</td>
<td>5</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Currently Dating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>133</td>
<td>50.8</td>
</tr>
<tr>
<td>No</td>
<td>129</td>
<td>49.2</td>
</tr>
<tr>
<td><strong>Relationship Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Partner or Casual Sexual Partner</td>
<td>142</td>
<td>54.2</td>
</tr>
<tr>
<td>Boyfriend/Serious Relationship</td>
<td>119</td>
<td>45.4</td>
</tr>
<tr>
<td><strong>Currently Has Child(ren)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>70</td>
<td>27.0</td>
</tr>
<tr>
<td>No</td>
<td>192</td>
<td>73.0</td>
</tr>
<tr>
<td><strong>Hope to Marry in the Future</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>241</td>
<td>92.0</td>
</tr>
<tr>
<td>Undecided</td>
<td>16</td>
<td>6.0</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Factor loadings were computed to determine which of the questions about perceived partner availability would work well together to develop a scale. These results are depicted in Table 2.2.

Table 2.2  Factor Loadings for Perceived Partner Availability Questions

<table>
<thead>
<tr>
<th>Component Matrix³</th>
<th>Component 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I believe that there are plenty of good single Black men available for single Black women who are looking for a long-lasting relationship.</td>
<td>.757</td>
</tr>
<tr>
<td>2. In general, I think that it is difficult to find a Black man who is willing to commit to a relationship.</td>
<td>.767</td>
</tr>
<tr>
<td>3. As a Black woman, I have no difficulty finding a Black man to date.</td>
<td>.608</td>
</tr>
<tr>
<td>4. Black women are in competition with other Black women for the good Black men.</td>
<td>.526</td>
</tr>
<tr>
<td>5. As I achieve higher status, it is increasingly difficult to find a single Black man to date.</td>
<td>.733</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

a. 1 components extracted.
Table 3.2 Inter-Item Correlation Matrix for Perceived Partner Availability Scale

<table>
<thead>
<tr>
<th>Q_1. I believe that there are plenty of good single Black men available for single Black women who are looking for a long-lasting relationship.</th>
<th>Q_2. In general, I think that it is difficult to find a Black man who is willing to commit to a relationship</th>
<th>Q_3. As a Black woman, I have no difficulty finding a Black man to date.</th>
<th>Q_4. Black women are in competition with other Black women for the good Black men.</th>
<th>Q_5. As I achieve higher status, it is increasingly difficult to find a single Black man to date.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q_1.</td>
<td>1.000</td>
<td>.485</td>
<td>.383</td>
<td>.274</td>
</tr>
<tr>
<td>Q_2. In general, I think that it is difficult to find a Black man who is willing to commit to a relationship</td>
<td>.485</td>
<td>1.000</td>
<td>.311</td>
<td>.246</td>
</tr>
<tr>
<td>Q_3. As a Black woman, I have no difficulty finding a Black man to date.</td>
<td>.383</td>
<td>.311</td>
<td>1.000</td>
<td>.132</td>
</tr>
<tr>
<td>Q_4. Black women are in competition with other Black women for the good Black men.</td>
<td>.274</td>
<td>.246</td>
<td>.132</td>
<td>1.000</td>
</tr>
<tr>
<td>Q_5. As I achieve higher status, it is increasingly difficult to find a single Black man to date.</td>
<td>.365</td>
<td>.471</td>
<td>.299</td>
<td>.315</td>
</tr>
</tbody>
</table>
Table 4.2  Perceived Partner Availability Scale Reliability if Item Deleted

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q_1. I believe that there are plenty of good single Black men available for single Black women who are looking for a long-lasting relationship.</td>
<td>13.78</td>
<td>9.868</td>
<td>.552</td>
<td>.323</td>
<td>.625</td>
</tr>
<tr>
<td>Q_2. In general, I think that it is difficult to find a Black man who is willing to commit to a relationship</td>
<td>13.22</td>
<td>10.043</td>
<td>.552</td>
<td>.343</td>
<td>.626</td>
</tr>
<tr>
<td>Q_3. As a Black woman, I have no difficulty finding a Black man to date.</td>
<td>13.70</td>
<td>10.504</td>
<td>.394</td>
<td>.184</td>
<td>.694</td>
</tr>
<tr>
<td>Q_4. Black women are in competition with other Black women for the good Black men.</td>
<td>12.95</td>
<td>11.850</td>
<td>.326</td>
<td>.132</td>
<td>.712</td>
</tr>
<tr>
<td>Q_5. As I achieve higher status, it is increasingly difficult to find a single Black man to date.</td>
<td>13.10</td>
<td>10.291</td>
<td>.521</td>
<td>.293</td>
<td>.639</td>
</tr>
</tbody>
</table>

Perceived Partner Availability Scale, four items were used in a summated scale score. Items 4 was removed to enhance reliability, increasing Chronbach’s Alpha reliability to .71.

Based on results of the factor analysis, a Perceived Partner Availability Scale was developed. Item analysis revealed that removing item 4 would increase Cronbach’s α reliability coefficient to .71. This final scale is displayed in Table 5.2.
Table 5.2 - Range and Means of Perceived Partner Availability Scale Items

(Alpha Reliability=.71)

<table>
<thead>
<tr>
<th>Strongly Agree - Strongly Disagree</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>2.9 (1.17)</td>
</tr>
<tr>
<td>1-5</td>
<td>3.5 (1.13)</td>
</tr>
<tr>
<td>1-5</td>
<td>3.0 (1.26)</td>
</tr>
<tr>
<td>1-5</td>
<td>3.6 (1.12)</td>
</tr>
</tbody>
</table>

A high score on the Perceived Partner Availability Scale indicates that respondents had high agreement with scale item statements suggesting that there is a low availability of male partners.

Table 6.2 - Descriptive Statistics and Reliability of the Perceived Partner Availability Scale

<table>
<thead>
<tr>
<th>Perceived Partner Availability Scale</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Mean</th>
<th>Reliability</th>
<th># of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>238</td>
<td>.846</td>
<td>3.51</td>
<td>.71</td>
<td>4</td>
</tr>
</tbody>
</table>

We hypothesized that women who perceived there to be a low availability of African-American male partners (as indicated by higher scores on the PPA scale) would report greater sexual risk taking and lower communication regarding HIV and risk reduction. Pearson correlations were generated to determine whether a significant relationship existed between Perceived Partner Availability scale scores and communication about sexual risk and condom use behavior among college-educated African-American women ages 25-34. These correlations are displayed in Table 7.2. “Do you/Did you feel hesitant about discussing using condoms with your most recent sex partner?” was significantly correlated with Perceived Partner Availability (PPA) Scale scores ($r = -.202, p = .006$). “Have you ever insisted/demanded that your partner use a condom when he did not want to?” was significantly correlated
with PPA scale scores ($r = -.184, p = .002$). “How often have you been afraid to talk to your most recent sex partner about using condoms because you were afraid he would have sex with a woman that does not demand using condoms?” was significantly correlated with PPA scale scores ($r = .142, p = .029$). “How often have you been afraid to talk to your most recent sex partner about using condoms because you were afraid he would threaten to leave you?” was significantly correlated with PPA scale scores ($r = .131, p = .044$). “How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would ignore your request to talk?” was significantly correlated with PPA scale scores ($r = .140, p = .035$). “How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would threaten to leave you?” was significantly correlated with PPA scale scores ($r = .130, p = .048$). “How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would actually leave you?” was significantly correlated with PPA scale scores ($r = .130, p = .046$).
Table 7.2. Frequencies, Means, and Correlations for Perceptions of Partner Availability Scale and Condom Use/Sexual Risk Behavior Items

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Correlation Coefficient</th>
<th>Sig. (two-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you/Did you feel hesitant about discussing using condoms with your most recent sex partner? (1= Yes, 2= No)</td>
<td>261</td>
<td>1.95</td>
<td>-.202**</td>
<td>.002</td>
</tr>
<tr>
<td>Have you ever insisted/demanded that your partner use a condom when he didn’t want to? (1=Yes, 2=No)</td>
<td>155</td>
<td>1.43</td>
<td>-.184*</td>
<td>.028</td>
</tr>
<tr>
<td>How often have you been afraid to talk to your most recent sex partner about using condoms because you were afraid he would- Have sex with a woman that does not demand using condoms? (1=Never Afraid - 5= Always Afraid)</td>
<td>259</td>
<td>1.14</td>
<td>.142*</td>
<td>.029</td>
</tr>
<tr>
<td>How often have you been afraid to talk to your most recent sex partner about using condoms because you were afraid he would- Threaten to leave you? (1=Never Afraid - 5= Always Afraid)</td>
<td>260</td>
<td>1.08</td>
<td>.131*</td>
<td>.044</td>
</tr>
<tr>
<td>How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would- Ignore your request to talk? (1=Never Afraid - 5= Always Afraid)</td>
<td>252</td>
<td>1.26</td>
<td>.140*</td>
<td>.035</td>
</tr>
<tr>
<td>How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would- Threaten to leave you? (1=Never Afraid - 5= Always Afraid)</td>
<td>258</td>
<td>1.14</td>
<td>.130*</td>
<td>.048</td>
</tr>
<tr>
<td>How often have you been afraid to talk to your most recent sex partner about him having other sex partners because you were afraid he would- Actually leave you? (1=Never Afraid - 5= Always Afraid)</td>
<td>258</td>
<td>1.16</td>
<td>.130*</td>
<td>.046</td>
</tr>
</tbody>
</table>

* Significance at the .05 level (2-tailed)
** Significance at the .01 level (2-tailed)

A hierarchical logistic regression analysis was used to determine which variables may predict condom use at last sex (coded 0= condom use, and 1= non-condom use). The predictor variables in the 3-step hierarchical model were based on variables identified in the literature summarized in chapter two. The hierarchical logistic regression results are presented in Table 8.2.
The first block was composed of four variables examining demographic and biographic characteristics (e.g., age, income, motherhood status, and relationship type). Collectively, these four variables accounted for 19.6% of variance in the dependent variable (Nagelkerke $= .196$; Chi Square $= 23.421$). *Relationship Type (Not in Committed Relationship vs. In A Committed Relationship)* was a significant predictor of condom use at last sex ($p = .000$, OR $= 4.975$). This step of the model was statistically significant ($p = .000$).

The second block included, three behavioral variables (e.g., *An HIV test in the past 6 months; Requiring that Partners have an HIV test before ever having sex with them, Suspect or Know that current partner has other current sex partners*) which were added to the three variables from step one. The six total variables in this block accounted for 23.2% of variance. The addition of the three variables in block two accounted for an additional 3.6% of the variance in the dependent variable. There were no statistically significant variables added in this step of the model. However, *Relationship Type* remained significant ($p = .005$, OR $= 3.384$) the overall model was not statistically significant ($p = .000$).

In block three, one additional variable was added to determine whether perceived partner availability predicted condom use in this group of women. Perceived Partner Availability (PPA) summated scale score were entered into the model at step three, which accounted for 23.2% of variance (overall model). The variable added in block three did not account for any additional variance in the dependent variable. However, *Relationship Type* was still a statistically significant predictor for condom use at last sex in this step of the model, where women who reported being in committed relationships were 3.4 times less likely to have reported using a condom at last sex ($p = .006$, OR $= 3.385$). This overall model was statistically significant ($p = .000$).
Table 8.2 Summary of Hierarchical Logistic Regression Analysis for Condom Use.

<table>
<thead>
<tr>
<th>Block and Variable</th>
<th>Sig (2-tail)</th>
<th>Exp (B)</th>
<th>Sig (2-tail)</th>
<th>Exp (B)</th>
<th>Sig (2-tail)</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.939</td>
<td>.969</td>
<td>.985</td>
<td>.992</td>
<td>.984</td>
<td>.992</td>
</tr>
<tr>
<td>Income</td>
<td>.703</td>
<td>.911</td>
<td>.515</td>
<td>.848</td>
<td>.517</td>
<td>.848</td>
</tr>
<tr>
<td>Children (Yes vs No)</td>
<td>.077</td>
<td>.471</td>
<td>.099</td>
<td>.483</td>
<td>.100</td>
<td>.483</td>
</tr>
<tr>
<td>Relationship Type (None or Uncommitted vs Committed)</td>
<td>&lt;.000</td>
<td>4.975</td>
<td>.005</td>
<td>3.384</td>
<td>.006</td>
<td>3.385</td>
</tr>
<tr>
<td><strong>Block 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had HIV Test in Past 6 months (Yes vs No)</td>
<td>.855</td>
<td>.931</td>
<td>.856</td>
<td>.931</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require Partners HIV Test Before Ever Having Sex (Yes vs No)</td>
<td>.236</td>
<td>.622</td>
<td>.237</td>
<td>.622</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Know or Suspect Male Partner Has Other Current Partners (Yes vs No)</td>
<td>.136</td>
<td>2.123</td>
<td>.137</td>
<td>2.124</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Block 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Partner Availability Scale Score (1-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Summary Information</td>
<td>Chi Square</td>
<td>23.42</td>
<td>df</td>
<td>4</td>
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<td>Nagelkerke R²</td>
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<td></td>
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Condom Use at Last Sexual Experience was the binary dependent variable (0=Condom Use and 1=Non-Condom Use).

For dummy coded independent variables, the reference category is in italics.
DISCUSSION

In the present study, we developed a scale to measure college-educated African-American women’s perceptions of male partner availability in the African-American community. This scale has been named the Perceived Partner Availability (PPA) Scale (Table 5.2). Higher scores on this scale indicate that respondents had high agreement with scale item statements suggesting that there is a low availability of male partners. We hypothesized that women with higher scores on the PPA scale would be more likely to report greater sexual risk behavior and less communication with their partners regarding HIV and risk reduction. We examined relationships between summated scores on the PPA scale and communication about sexual risk and condom use behavior among college-educated African-American women ages 25-34 by identifying statistically significant correlations between items on the adapted SISTA evaluation instrument (DiClemente & Wingood, 1995) and PPA scale scores (Table 7.2). “Do you/Did you feel hesitant about discussing using condoms with your most recent sex partner?” was inversely correlated with PPA scale scores ($r = -.202$, $p = .006$), where women who had higher PPA scale scores were more likely to report that they felt hesitant about discussing condoms with their partners. “Have you ever insisted/demanded that your partner use a condom when he did not want to?” was also inversely correlated with PPA scale scores ($r = -.184$, $p = .002$), where women with higher PPA scale scores were less likely to report that they insisted or demanded that their partners use condoms when the male partner did not want to. “How often have you been afraid to talk to your most recent sex partner about using condoms because you were afraid he would have sex with a woman that does not demand using condoms?” was significantly correlated with PPA scale scores ($r = .142$, $p = .029$), where women with higher PPA scores were more likely to report greater fear about talking to their partners about condoms because they were afraid that their partners would have sex with a woman that would not demand condom use. “How often have you been afraid to talk to your most recent partner about using condoms because you were afraid he would threaten to leave you?” was significantly correlated with PPA scale scores ($r = .131$, $p = .044$), where women with higher PPA scores were more likely to report greater fear about talking to their partners about condoms because they were afraid that their partners
would threaten to leave them. “How often have you been afraid to talk to your most recent partner about him having other sex partners because you were afraid he would ignore your request to talk?” was significantly correlated with PPA scores ($r = .140, \ p = .035$), where women with higher PPA scores were more likely to report greater fear about talking to their sex partners about the males having other current sex partners because they were afraid that their partners would ignore their request to talk. “How often have you been afraid to talk to your most recent partner about him having other sex partners because you were afraid he would threaten to leave you?” was significantly correlated with PPA scale scores ($r = .130, \ p = .048$), where women with higher PPA scores were more likely to report greater fear about talking to their sex partners about the males having other current sex partners because they were afraid that their partners would threaten to leave them. “How often have you been afraid to talk to your most recent partner about him having other sex partners because you were afraid he would actually leave you?” was significantly correlated with PPA scale scores ($r = .130, \ p = .046$), where women with higher PPA scores were more likely to report greater fear about talking to their sex partners about the males having other current sex partners because they were afraid that their partners would actually leave them.

These results indicate that a relationship may exist between perceptions of a low availability of potential male partners in the African-American community and women’s communication with partners about sexual risk and condom use. Given the literature on African-American women’s barriers to adopting safer sex practices in light of the gender-ratio imbalance in the African-American community, these new findings present future directions for research on African-American women’s motivators for communication regarding HIV risk reduction. Prior qualitative work has explored the influence of perceptions of low availability of male partners and sexual health behavior. For example, in a study examining African-American women’s interpersonal relationships, sexual scripts, and condom use with primary partners, Bowleg, Lucas, and Tschann (2004) found that African-American women contending with the gender-ratio imbalance may be relinquishing negotiating power in their relationships, be more likely to settle for less desirable partners, accept infidelity, and agree to engage in unprotected sex, thus
exhibiting less sexual self-efficacy. Though Bowleg, Lucas, and Tschann’s sample was comprised of African-American women of varying levels of educational attainment, the ages ranged from 22-39 which overlaps with the age range of the participants in our study. Other researchers have identified possible links between gender-ratio imbalance and non-condom use in African-American females. In Ferguson, Quinn, Eng, & Sandelowski’s (2006) study conducted in historically black colleges and universities, African-American college-age females believed that a disproportionate gender-ratio imbalance was responsible for women relinquishing their agency and complying with men’s preferences for condom or non-condom use in order to secure a sexual partner. Additionally, a study by Wyatt et al. (2000) found that African-American women’s emotional needs for a romantic partner may be more influential in their decisions about protective behaviors than personal risk prevention decisions alone. While the aforementioned studies discussed perceptions of partner availability and African-American women’s risk behavior, they did so through qualitative methods or theory development alone. Our study is innovative and as it uses quantitative methods to examine this phenomenon, and while we do not present strong evidence to suggest that perceptions of partner availability is related to sexual behavior (such as actual condom use) among these women, our findings do suggest that it may be related to health communication in this group of college-educated African-American women ages 25-34, whose struggles with the gender-ratio imbalance may be more pronounced than their less educated counterparts as a high level of education and financial independence can result in an African-American female being considered less desirable to an African-American male partner who does not have similar credentials (of whom there are fewer), leaving the educated African-American woman less likely to marry or stay married (Packer-Williams, 2009).

The results from our Pearson correlation analysis prompted further examination of the influence of perceived partner availability on sexual risk behavior. We constructed a hierarchical logistic regression model that included demographic variables, behavioral variables, and PPA scale scores as predictor variables for condom use at last sex (Table 8.2). Relationship Type (None or Uncommitted vs. 
Committed) was the only statistically significant predictor for condom use, where those women who reported currently being in a committed relationship were 3.4 times less likely to have used a condom at last sex ($p = .006, \text{ Exp } B= 3.385$). This finding is not surprising, and is consistent with the literature on this topic as a number of studies have found that partners involved in a relationship are less likely to consistently use condoms, if at all (Macaluso, Demand, Artz, & Hook, 2000; Misovich, Fisher, & Fisher, 1997; Lansky, Thomas, & Earp, 1998; Norris & Ford, 1999; St. Lawrence et al., 1998). Being in a mutually monogamous relationship with an uninfected partner is certainly a useful strategy in HIV risk reduction. However, it is important to consider that though African-American women involved in heterosexual relationships that they perceive to be monogamous may consider themselves to be at lower risk for HIV infection, African-American women overall are involved in higher rates of concurrent sexual partnerships, also known as “man sharing” than are women of other groups, oftentimes unknowingly (Morris et al., 2009; Adimora et al., 2006; Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). African-American women may also have higher rates of serial monogamy, which is defined by a series of short-term monogamous relationships (Norris & Ford, 1999; St. Lawrence et al., 1998; Adimora & Schoenbach, 2002). Thus, non-condom use within the context of a relationship for African-American women may still present a risk environment for HIV infection.

Future efforts aimed at this group of women should seek to validate the strides that they have already made in lowering their risk for HIV by maintaining committed, and conceivably monogamous relationships, while personalizing additional risk reduction strategies that do not undermine the trust established in their relationships, but also encourage continued vigilance regarding risk. A prevention campaign that promotes regular HIV testing for couples may be an effective strategy for increasing perceived susceptibility and addressing HIV risk for African-American women who are less likely to use condoms as a result of being involved in relationships. Additionally, as women’s feelings about condoms may be strongly influenced by their perceptions of male partners’ preference for non-condom use, developing interventions and prevention messages that encourage male partner support for condoms may
be effective in increasing positive views toward the use of condoms within the context of committed relationships for African-American women. Programs that incorporate the involvement of women’s male partners can prove useful in changing community perceptions and norms around condom use.

The hierarchical logistic regression analyses indicate that Perceived Partner Availability scale scores are not useful as predictors for condom use at last sex among college-educated African-American women ages 25-34. Relationship type appears to be the salient variable for this group of women. These results do however provide new direction for future research. It will be important to stratify this group of women by relationship type for future analyses in order to gain a better understanding of predictors of condom use for those women who are not in committed relationships. Future research among this group of women should also seek to illuminate the relationship between perceptions of male partner availability and women’s agency in sexual communication and negotiating safer sex.

In order to make significant strides in HIV prevention and intervention, programs must incorporate the life experiences of African-American females (El-Bassel et al., 2009). Future studies that account for the unique structural, social, and relational aspects of African-Americans are likely to prove more effective than the individual-level approaches that have seen little utility in curbing the HIV epidemic in this community. Prevention of HIV/AIDS in the African-American community would benefit from a paradigm shift in the design and implementation of interventions whereby the significant role of culture as it influences behavior and behavior change is central (Nobles, Goddard, & Gilbert, 2009). Though African-Americans have some of the lowest rates of marriage in the country (Pinderhughes, 2002), our participants demonstrate that this reality is not for lack of desire for marriage. To say that marriage is not traditionally part of African-American culture is completely erroneous. What is most definitely part of African-American culture; however often overlooked, are the structural influences resulting in difficulty in establishing productive romantic relationships that lead to marriage, while simultaneously exacerbating risk for HIV in this community. Human well-being is a “relational event” that results from and is defined by “situational-bound units of relationships between people” and
their environment (King & Nobles, 1997). In our attempts to understand health behavior and well-being with regard to HIV risk, researchers must begin to analyze the heterosexual relationships that are largely defined by situations and circumstances in the African-American community (e.g., limited male partner availability), instead of focusing narrowly on behavior without accounting for context.

There are, however, some limitations in this study. Women involved in the study were self-selected for participation. There may have been some differences between women who participated in this study, and those who did not or decided to withdraw from participation. We were unable to identify any patterns of participant withdrawal based on survey items, but we might assume that women with increased sensitivity to certain subject matter in the survey may have chosen to withdraw their participation. Additionally, classification of the type of partnerships that the women were involved in was based on the perceptions and reports of the women. We do not know how their male partners defined the nature of their relationships. It may be unlikely that there was confusion or deception on the part of our female participants with regard to reporting of relationship type. Yet, we cannot be sure that both members of the dyad viewed their relationships as serious or mutually monogamous, which may create bias in our logistic regression results. Another important limitation of this study is that we did not include a question that addressed women’s perceptions of how their partners felt about condom use. This type of question would have allowed us to make clearer assumptions about how male partners’ condom preference influence decision-making about condom use for these women. Additionally, our study asked participants what their current relationship status was at the time of the survey. This may not necessarily reflect their relationship status at the time of last sex, which may cloud our understanding of the relationship between their relationship status and condom use behavior. Finally, the results of this study are based on self-report, which may be difficult to validate, and cross-sectional survey data. We are able to identify potential correlations between variables and condom use behavior, but cannot establish causality with this type of study design.
CONCLUSION

In summary, the results of this study support prior research finding that condom use varies based on the type of relationship that the sexual partnering occurs in. Condom use appears to be less consistent in committed relationships. While this can decrease risk for HIV transmission in many cases, the context of limited partner availability and smaller sexual networks for college-educated African-American women raises concern with regard to non-condom use in this setting. Future research is needed in this area to explore and contextualize the unique risk factors of this population of African-American women in order to effectively address their needs for HIV prevention. College-educated African-American women are often ignored in the discourse on HIV prevention in research, as their lower-educated and lower-income counterparts are more often the focus of HIV research studies. Leaving this group out of the conversation on HIV prevention may result in a false sense of security for these women. As it has been reported that higher education and financial earnings improve individuals’ access to health information and care (Freudenberg & Ruglis, 2007), study recommendations that focus on limited access to HIV information, testing, and care are of less importance to this group. A more targeted approach is needed to reach this overlooked group. Designing interventions that address the real life concerns of these women, such as negotiating condom use while balancing the concern of losing a male partner in a context where partners are hard to come by could prove far more effective in HIV prevention than increasing the availability of free condoms. Adopting a cultural view of health behavior while designing studies that account for the ways that culture may operate differently within a given race across educational, economic, and environmental lines will certainly bolster our efforts in effectively addressing the problem of HIV/AIDS in the African-American community, a group that in spite of much effort, continues to be disproportionately affected by this disease.
REFERENCES


APPENDIX A- Internet Recruitment Script

Are you interested in participating in survey about being a professional Black woman and dating in the African-American community? This survey is being conducted as part of a research study by a graduate student in the department of Biobehavioral Health at Penn State University. Question topics will include the shortage of available Black men, sexual risks, and partner choices. To thank you for your participation, you have the option of being entered into a drawing for a $100 Amazon gift card. To participate, you must be:

- African-American
- Female
- Heterosexual
- Between the ages of 25-34
- Unmarried
- Received a Bachelor’s Degree or Higher
- English-speaking

To complete the survey, follow this link:
https://pennstate.qualtrics.com/SE/?SID=SV_20n8ESWNNXjrOmN

If you have any questions, please contact the researcher Valerie Newsome, directly at:

VNK105@psu.edu or (850) 322-9052
## APPENDIX B - Participant Representation by State

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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>5.0</td>
<td>5.7</td>
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<tr>
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<td>.4</td>
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APPENDIX C - Participants' Average Annual Gross Income

![Bar chart showing average annual gross income distribution. The chart includes categories such as $0-$10,000, $10,001-$15,000, $15,001-$25,000, $25,001-$35,000, $35,001-$45,000, $45,001-$55,000, and $55,001-$65,000. The percentages for each income range are: 3.92%, 1.17%, 1.96%, 2.52%, 10.59%, 25.49%, and 16.88%, respectively.]

The chart shows that the highest percentage of participants fall into the $25,001-$35,000 income range, with 25.49%.
CHAPTER 5

Paper 3

Predictors of Condom Use Among Unpartnered College-Educated African-American Women

Valerie R. Newsome, MS
Collins O. Airhihenbuwa, PhD, MPH
Gary X. King, PhD
Edgar P. Yoder, PhD

Abstract

This study details results from an internet-based study conducted from October-November 2012. Participants were recruited through purposive network sampling via email and the Facebook website across the United States. Of those recruited, 262 participants met the inclusion criteria, and were asked to complete an anonymous survey on the internet. Of those women, 142 reported that they were not currently in a committed relationship. Pearson correlations were analyzed to examine relationships between Perceived Partner Availability Scale Scores and communication with male partners about condom use. A Hierarchical Logistic Regression Model was used to identify variables that may predict non-condom use in this sample of African-American knowing or suspecting that their current male sex partner had other current sex partners predicted a greater likelihood of condom use at last sex act. These findings also dispute prior theories suggesting that gender-ratio imbalance and perceptions of low male partner availability in the African-American community serve as contributors to low condom use among this group of college educated African-American women. Risk behavior associated with “man sharing” is also discussed. Future directions for HIV prevention research and intervention are presented.

BACKGROUND

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) is a leading cause of death for African-American women ages 25-34 (Centers for Disease Control [CDC], 2009). Heterosexual contact is the most common method of HIV transmission for African-American women at 87% (CDC, 2013). While the reasons underlying the disproportionate number of HIV
infections identified in African-American women compared to other races have been explored, the assumptions drawn from reports and statistics often suggest that African-American women are more sexually promiscuous than other groups (Boyce & Cain, 2007). However, studies suggest that African-American women are no more likely to engage in unprotected sex than their White counterparts (Tillerson, 2008). Though the scientific literature has addressed various factors contributing to higher incidence of HIV/AIDS in African-American women, most of the published research explores African-American women at low socioeconomic status giving little attention to the unique within-group differences associated with African-American women’s HIV risk behavior. This study seeks to examine the less conspicuous variables that may influence HIV risk for college-educated African-American women between ages 25-34, an often overlooked group in the literature on HIV prevention.

**Condom Use Among African-American Women**

Various cultural, contextual, psychosocial, and relational factors can influence whether or not African-American women choose to use condoms. Situational factors such as relationship type, stage of relationship, partner’s preference for condom use, or desire for pregnancy may implicate decision-making around condom use in the time of an HIV epidemic (Macaluso, Demand, Artz, & Hook, 2000; Cabral et al., 1998; St. Lawrence et al., 1998; Wingood & DiClemente, 1998). Past studies have concluded that African-American women may hold negative views toward male condoms, viewing them as pleasure inhibiting, associated with infidelity, and interrupting intimacy (Weeks, Schensul, Williams, & Singer, 1995; Sobo, 1993). However, when asked to choose a preferred barrier method for HIV prevention, African-American women tend to prefer male condoms over other barrier devices (Macaluso, Deman, Artz, & Hook, 2000; Johnson et al., 1992). However, many women perceive that their male partners do not prefer condom use during sex (Johnson et al., 1992). With this in mind, college-educated African-American women who often have difficulty in identifying African-American males with whom they can form romantic partnerships (Davis et al., 2000; Packer-Williams, 2009) may weigh their partner’s preferences more heavily in their decision-making about condom use.
**Characteristics of the Sexual Partnerships of African-American Women**

Heterosexual African-American women tend to seek monogamous relationships with men who are also African-American (Laumann & Youmm, 1999), educated, and financially stable (King & Allen, 2009). This is probably most true of college-educated African-American women. A limited availability of eligible African-American males fitting these criteria as a result of structural influences such as poor education systems, low employment rates and high incarceration rates for African-American males (Fullilove, Fullilove, Haynes, & Gross, 1990) has led to a smaller pool from which these women can select sex partners. Limited partner availability has been cited as a driver of concurrent partnerships and HIV transmission in the African-American community (Adimora et al., 2006). A small pool of potential partners has also been identified as a possible reason for African-American women settling for casual sexual relationships over those that are monogamous (Adimora et al., 2006). As concurrent partnerships; sexual partnerships where one or both partners also have other sexual partnerships that overlap in time (Morris, Kurth, Hamilton, Moody, & Wakefield, 2009), appear to be more common for African-American women than women of other racial groups (Adimora et al., 2006), “man sharing” is a phenomenon that appears to be more commonly found in the African-American community (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). It is important to note that “man sharing” may occur with or without the knowledge or consent of all parties involved.

**Purpose of the Study**

Prior regression analyses using this survey data revealed that women who reported currently being involved in committed relationships were less likely to have used a condom the last time they had sex, and that perceived partner availability did not predict for condom use at last sex (unpublished data, V. Newsome 2013). The purpose of the current study is to analyze responses only for the women in the sample who report not currently being in a committed relationship to determine whether their predictors of condom use at last differ from those of their committed counterparts.
METHOD

Participant Recruitment

Recruitment for this study took place October-November 2012. A purposive network sampling strategy was used to identify women who met the inclusion criteria of being English-speaking, unmarried, heterosexual, African-American, college-educated, and age 25-34. An Institutional Review Board (IRB) approved recruitment script (please see Appendix A) was posted on the primary investigator’s personal Facebook page to invite participants to take the online survey. The recruitment script was also forward through Facebook and email to women that were likely to meet the inclusion criteria, and as with network sampling, the recruitment script was forwarded to others who might be eligible and interested in participating in the survey. The recruitment script directed participants to a hyperlink to the internet survey where the IRB approved implied consent form was provided, explaining the purpose of the study, limitations on confidentiality while utilizing internet technology, participants’ option to withdraw their participation at any time, and information of the incentive to be entered into the drawing for a $100 Amazon gift card. Of the 458 recruited, 262 participants met the inclusion criteria as listed above and completed the survey instrument. Here we analyze data for only the 142 women reporting that they were not currently involved in committed relationships. Table 1 displays demographic attributes of the study participants.

Data Collection

IRB approval for the study was obtained from the Pennsylvania State University Office of Research Protections prior to the start of data collection activities. There were no time restrictions on completing the internet survey. However, most participants completed the entire survey in 10-15 minutes. At the conclusion of the survey, participants were given an option to be directed to a separate website where they could enter their email address into a lottery to win a $100 Amazon gift card.
Survey Instrument

The survey instrument used was adapted from DiClemente & Wingood’s (1995) SISTA (Sisters Informing Sisters about Topics on AIDS) Project Original Evaluation Instrument, which was developed for use with young African-American women. The survey was modified based on pilot testing conducted with college-educated African-American women ages 25-34 (study details published elsewhere). The overall survey instrument included questions about demographic details, relationship characteristics, as well as questions about HIV knowledge, and risk behavior.

Data Analysis

All data analyses were performed using IBM SPSS Statistics version 19. Descriptive statistics were computed to determine frequencies across all survey items. Questions used to assess specific constructs were combined into scales (including HIV Knowledge Scale, and Perceived Partner Availability Scale). Details regarding these scales are reported elsewhere. For the present study, hierarchical logistic regression analyses were conducted to investigate the relationship between condom use at last sex and a number of variables of interest.

RESULTS

Demographic characteristics of sample

The total sample included 142 self-selecting participants. All participants were heterosexual African-American women between ages 25-34 (M= 31, SD= 2.4) that had completed at minimum a 4-year college degree. When asked if they hoped to marry in the future, most responded “yes” (n= 129, 90.8%). The majority of the sample reported that they had no children of their own (n= 109, 76.8%). The mean score on the HIV knowledge scale was 11.64 (min= 8, max=13), indicating high knowledge of how HIV is transmitted. Key demographic and behavioral characteristics of the study participants are presented in Table 1.3.
Table 1.3 - Key Demographic and Behavioral Characteristics of Study Participants (N= 142)

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>26</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td>27</td>
<td>16</td>
<td>11.3</td>
</tr>
<tr>
<td>28</td>
<td>10</td>
<td>7.0</td>
</tr>
<tr>
<td>29</td>
<td>14</td>
<td>9.9</td>
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<tr>
<td>30</td>
<td>26</td>
<td>18.3</td>
</tr>
<tr>
<td>31</td>
<td>25</td>
<td>17.6</td>
</tr>
<tr>
<td>32</td>
<td>19</td>
<td>13.4</td>
</tr>
<tr>
<td>33</td>
<td>12</td>
<td>8.5</td>
</tr>
<tr>
<td>34</td>
<td>9</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Neighborhood</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>91</td>
<td>64.1</td>
</tr>
<tr>
<td>Suburban</td>
<td>45</td>
<td>31.7</td>
</tr>
<tr>
<td>Rural</td>
<td>6</td>
<td>4.2</td>
</tr>
<tr>
<td><strong>Highest Level of Education Completed</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>College (4 year/Bachelor's Degree)</td>
<td>73</td>
<td>31.7</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>53</td>
<td>41.5</td>
</tr>
<tr>
<td>Doctoral or Professional Degree</td>
<td>16</td>
<td>23.9</td>
</tr>
<tr>
<td><strong>Preferred Race for Dating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African-American Only</td>
<td>45</td>
<td>31.7</td>
</tr>
<tr>
<td>African-American preferred, but date others</td>
<td>59</td>
<td>41.5</td>
</tr>
<tr>
<td>No race preference</td>
<td>34</td>
<td>23.9</td>
</tr>
<tr>
<td>Non- African-American</td>
<td>4</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>Currently Has Child(ren)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>33</td>
<td>23.2</td>
</tr>
<tr>
<td>No</td>
<td>109</td>
<td>76.8</td>
</tr>
<tr>
<td><strong>Hope to Marry in the Future</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>129</td>
<td>90.8</td>
</tr>
<tr>
<td>Undecided</td>
<td>9</td>
<td>6.3</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>2.1</td>
</tr>
<tr>
<td><strong>Condom Use at last sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>78</td>
<td>54.9</td>
</tr>
<tr>
<td>No</td>
<td>64</td>
<td>45.1</td>
</tr>
<tr>
<td><strong>HIV Testing in past 6 months</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>85</td>
<td>59.9</td>
</tr>
<tr>
<td>No</td>
<td>57</td>
<td>40.1</td>
</tr>
<tr>
<td><strong>Require Partners have HIV test before ever having sex with them</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49</td>
<td>34.5</td>
</tr>
<tr>
<td>No</td>
<td>91</td>
<td>64.1</td>
</tr>
<tr>
<td><strong>Suspect (or know) that current sex partner has other sex partners</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>20.4</td>
</tr>
<tr>
<td>No</td>
<td>25</td>
<td>17.6</td>
</tr>
<tr>
<td>Do not have a current sex partner</td>
<td>88</td>
<td>62.0</td>
</tr>
</tbody>
</table>
We used summated PPA Scale scores to investigate associations between perceptions of low availability of male partners in the African-American community with condom use behavior. The PPA scale was specifically designed for use in college educated African-American female populations (unpublished data, V. Newsome 2013). A high score on the Perceived Partner Availability Scale indicates that respondents had high agreement with scale item statements suggesting that there is a low availability of male partners. This scale has Cronbach’s alpha reliability at .71.

Pearson correlations were computed to investigate an association between women’s perceived availability of African-American male partners and the adapted SISTA scale items (DiClemente & Wingood, 1995) that addressed condom use behavior. Those correlations that were statistically significant are presented here. “Do/Did you feel hesitant about discussing condoms with your most recent sex partner?” was significantly correlated with PPA scale scores where women with higher scores were more likely to be hesitant to discuss condoms with their most recent sex partners ($r = -.271$, $p = .022$). “Do/Did you always use condoms with your most recent sex partner?” was significantly correlated with PPA scale scores where women with higher scores were less likely to have always used condoms with their most recent sex partner ($r = .278$, $p = .001$). These correlations are presented in Table 2.3.

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Sig.</th>
<th>Mean</th>
<th>Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you/Did you feel hesitant about discussing using condoms with your most recent sex partner? (1= Yes, 2= No)</td>
<td>0.02</td>
<td>1.93</td>
<td>-.271*</td>
</tr>
<tr>
<td>Do/Did you always use condoms with your most recent sex partner? (1=Yes, 2=No)</td>
<td>.001</td>
<td>1.56</td>
<td>.278**</td>
</tr>
</tbody>
</table>

* Significance at the .05 level (2-tailed)

** Significance at the .01 level (2-tailed)
Hierarchical logistic regression was used to examine the influence of selected predictor variables for non-condom use at last sex (coded 0= condom use, and 1= non-condom use). The predictor variables in the 3-step hierarchical model were based on variables identified in the literature summarized in chapter two. The first block was composed of three variables examining demographic and biographic characteristics (eg.- age, income, and motherhood status). Collectively, these three variables accounted for 6.0% of variance in the dependent variable (Nagelkerke= .068; Chi Square= 2.639; p= .451). There were no variables in this step of the model that were statistically significant, and the overall model was not statistically significant.

The second block included, three behavioral variables (eg.- An HIV test in the past 6 months; Requiring that Partners have an HIV test before ever having sex with them, Suspect or Know that current partner has other current sex partners) which were added to the three variables from step one. The six total variables in this block accounted for 25.2% of variance. The addition of the three variables in block two accounted for an additional 18.4% of the variance in the dependent variable. In block two, the only statistically significant variable was Do you suspect or know that your current sex partner has other current sex partners? (p = .032, OR = 4.252).

In block three, one additional variable was added to determine whether or not perceived partner availability predicted condom use in this group of women. Perceived Partner Availability (PPA) summated scale score were entered into the model at step three, which accounted for 26.1% of variance (overall model). The variable added in block three accounted for an additional 0.9% of the variance in the dependent variable.

Odds ratios (Exp B values) for the final model indicate that suspecting or knowing that your sex partner also has other current sex partners may increase likelihood of using a condom at last sex (OR= 4.248).
Table 3.3  Summary of Hierarchical Logistic Regression Analysis for Condom Use for College-Educated African-American Women not Currently in Relationships

<table>
<thead>
<tr>
<th>Block and Variable</th>
<th>Sig (2-tail)</th>
<th>Exp (B)</th>
<th>Sig (2 tail)</th>
<th>Exp (B)</th>
<th>Sig (2 tail)</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.335</td>
<td>.548</td>
<td>.624</td>
<td>.706</td>
<td>.541</td>
<td>.640</td>
</tr>
<tr>
<td>Income</td>
<td>.872</td>
<td>.926</td>
<td>.447</td>
<td>.653</td>
<td>.424</td>
<td>.635</td>
</tr>
<tr>
<td>Children (Yes vs No)</td>
<td>.197</td>
<td>.420</td>
<td>.153</td>
<td>.340</td>
<td>.223</td>
<td>.391</td>
</tr>
<tr>
<td><strong>Block 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Had HIV Test in Past 6 months (Yes vs No)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require Partners HIV Test Before Ever Having Sex (Yes vs No)</td>
<td></td>
<td></td>
<td>.222</td>
<td>.406</td>
<td>.180</td>
<td>.349</td>
</tr>
<tr>
<td>Know or Suspect Male Partner Has Other Current Partners (Yes vs No)</td>
<td></td>
<td></td>
<td>.032</td>
<td>4.252</td>
<td>.033</td>
<td>4.248</td>
</tr>
<tr>
<td><strong>Block 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Partner Availability Scale Score (1-5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model Summary Information</td>
<td>Chi Square 2.639 df 3 Sig (2 tail) .451 Nagelkerke R² .068</td>
<td>Chi Square 10.473 df 6 Sig (2 tail) .106 Nagelkerke R² .252</td>
<td>Chi Square 10.893 df 7 Sig (2 tail) .143 Nagelkerke R² .261</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Condom Use at Last Sexual Experience was the binary dependent variable (0=Condom Use and 1=Non-Condom Use).
For dummy coded independent variables, the reference category is in *italics*. 
DISCUSSION

The present study adds to the literature examining the context around condom use among college-educated African-American women, a group that is understudied in research on HIV prevention. While research has suggested that perceptions of limited male partner availability may influence sexual risk taking and HIV risk, this study finds that Pearson correlations may demonstrate an association between women’s perceptions of male partner availability and reluctance to discuss or demand condom use, but our logistic regression analyses indicate that participants’ scores on the Perceived Partner Availability (PPA) Scale do not predict for condom use at last sex among college-educated African-American women who are not currently involved in committed relationships.

Pearson correlations were used to examine relationships between participants’ PPA scale scores and questions on the adapted SISTA evaluation instrument (DiClemente & Wingood, 1995). Of the items on the adapted SISTA instrument, participants’ PPA scale scores were significantly correlated with two questions, “Do/Did you feel hesitant about discussing condoms with your most recent sex partner?” ($r = -.271$, $p = .022$), and “Do/Did you always use condoms with your most recent sex partner?” ($r = .278$, $p = .001$). These findings indicate that women in this group who perceive there to be a low availability of African-American male partners may be more hesitant about discussing or demanding condom use. These findings are consistent with other published literature regarding effects of perceptions of low partner availability on the agency of African-American women around condom use (Bowleg, Lucas, & Tschann, 2004; Ferguson, Quinn, Eng, & Sandelowski, 2006; Wyatt, 2000). However, when we entered this variable into a hierarchical logistic regression model to assess predictors for condom use at last sex, perceived partner availability was not a significant predictor. In fact, the only significant variable in this model was “Suspecting or knowing that your current sex partner has other current sex partners” ($p = .033$, $OR = 4.25$).
African-American women are more likely to be involved in concurrent sexual partnerships, also known as “man sharing” than are women of other groups, oftentimes unknowingly (Morris et al., 2009; Adimora et al., 2006; Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). African-American women may also have higher rates of serial monogamy, which is defined by a series of short-term monogamous relationships (Norris & Ford, 1999; St. Lawrence et al., 1998; Adimora & Schoenbach, 2002). Thus, non-condom use for African-American women may present an increased risk environment for HIV infection. In the present study, 20.4% \((n = 29)\) of respondents indicated that they suspected or knew that their partners also had other sex partners. Of those women, 65.5% \((n = 19)\) reported that they use condoms every time they had sex with that partner. This is can be viewed as a positive finding where women in this group are exhibiting protective behavior and HIV risk reduction strategies in a context where college-educated African-American women may have the smallest pool of eligible males from which to choose and a small sexual network results. These findings may be unique to college-educated African-American women as compared to risk reduction behavior observed among their less educated counterparts. However, in this type of scenario, the high risk behaviors of a few can increase the level of risk for the entire group because the network is more racially and demographically segregated, and becomes a smaller pool within which a transmittable disease can spread more rapidly (Laumann & Youm, 1999). Concerns regarding non-condom use for those women who do not use condoms every time they have sex with partners whom they suspect or know have other sexual partners still exist as there are higher rates of partner concurrency and man sharing in the African-American community (Adimora et al., 2006; Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992). A culturally-sensitive intervention that raises awareness about man sharing among African-Americans has been proposed to highlight the increased HIV risks associated with this phenomenon (Johnson et al., 1992). This type of intervention could be productive in the way of messaging designed to increase perceived susceptibility and awareness of how this practice can affect HIV rates within a given community.
It is also important to note that when asked if they used a condom at last sex, 54.9% of our total sample responded “Yes” \((n = 78)\), while 45.1% of our sample responded “No” \((n = 64)\). This finding is troubling as none of the women in this sample reported being in a committed relationship. We were unable to identify a statistically significant regression model to predict for condom use at last sex in this study. Further research is needed to understand the predictors and context around condom use decisions within this subpopulation of educated women; a group that is often ignored in HIV prevention research among African-American women.

Prevention messages and programming that are community-oriented and gender-sensitive would likely appeal to college-educated African-American women. Furthermore using images that depict African-American women with whom they can identify, matching on various demographic aspects other than race (e.g.- age, career orientation, etc.), as opposed to the more commonly seen young urban depictions of African-American females would be advantageous in reaching this under-represented, yet still at-risk group. An important strength of this study is that it is to our knowledge the first of its kind to quantitatively measure variables associated with HIV risk exclusively in college-educated African-American women ages 25-34. Although the sample selection was not random, it does offer a glimpse into HIV risk for African-American women of this demographic as participants in this study represented many communities across the United States. This is important as risk factors for college-educated African-American women may differ for from those of their less educated counterparts, or those of other age groups. Studies of this kind provide valuable information to researchers for the purposes of targeted prevention and intervention planning.

There are some limitations to this study. Women involved in the study were self-selected for participation. There may have been some differences between women who participated in this study, and those who did not or decided to withdraw from participation. Additionally, our study asked participants what their current relationship status was at the time of the survey. This may not necessarily reflect their
relationship status at the time of last sex, which may cloud our understanding of the relationship between their relationship status and the variables analyzed in the logistic regression analysis.

CONCLUSIONS

College-educated African-American women may have the most difficulty in identifying male partners for establishing romantic relationships (Packer-Williams, 2009; Davis et al., 2000). Our study demonstrates that among this group of women, perceptions of a low availability of male partners may be associated with reluctance to discuss or demand condom use. Further research is needed to better understand the factors that predict and influence condom use in this over-looked population of African-American women, so that future intervention efforts might more effectively address their unique needs for HIV prevention.
REFERENCES


APPENDIX A - Internet Recruitment Script

Are you interested in participating in a survey about being a professional Black woman and dating in the African-American community? This survey is being conducted as part of a research study by a graduate student in the department of Biobehavioral Health at Penn State University. Question topics will include the shortage of available Black men, sexual risks, and partner choices. To thank you for your participation, you have the option of being entered into a drawing for a $100 Amazon gift card. To participate, you must be:

- African-American
- Female
- Heterosexual
- Between the ages of 25-34
- Unmarried
- Received a Bachelor’s Degree or Higher
- English-speaking

To complete the survey, follow this link:
https://pennstate.qualtrics.com/SE/?SID=SV_20n8ESWNNXjrOmN

If you have any questions, please contact the researcher Valerie Newsome, directly at:
VNK105@psu.edu or (850) 322-9052
Chapter 6

Discussion

In this chapter, an overview of the purpose of the study is presented, and a summary of the three papers is provided.

Study Overview

The purpose of this study was to examine the extent to which the socio-cultural context of gender-ratio imbalance in the African-American community resulting from structural drivers influences HIV risk behaviors for heterosexual college-educated African-American women ages 25-34. African-Americans are disproportionately infected with HIV, and it is imperative that research studies explore the less conspicuous cultural influences on health behavior. The values, norms, and experiences of the African-American community may be more salient drivers and predictors of behavior change with regard to HIV prevention than the more commonly utilized individual-level approaches.

Using a cultural lens as a guide, the specific objectives of this study were to gather qualitative and quantitative data using focus groups and pen-paper survey from a small sample of unmarried, heterosexual, college-educated African-American women ages 25-34 in Chicago, Illinois, USA on their experiences, perceptions, and perspectives of the gender-ratio imbalance, and its effects on heterosexual relationships and sexual risk taking in the African-American community in Paper 1. We then used the PEN-3 Cultural Model to identify the positive, existential (unique), and negative cultural influences on HIV risk behavior as reported by the study participants in focus group discussions. In Paper 2, we conducted a nation-wide internet-based survey to gather quantitative data investigating the effects of perceived partner availability on HIV risk behavior and communication among unmarried, heterosexual, college-educated African-American women ages 25-34. We also present a hierarchical logistic regression analysis designed to identify predictors of condom use at last sex among this group of women. In Paper 3, we used hierarchical logistic regression analyses to identify demographic and behavioral factors that
may predict HIV-risk behavior in heterosexual, college-educated African-American women ages 25-34, specifically those who report not currently being involved in committed relationships.

This study builds on prior work by Bowleg, Lucas, and Tschann (2004) examining African-American women, power in relationships, and condom use, and Ferguson, Quinn, and Sandelowski’s (2006) investigating the effects of gender-ratio imbalance on HIV risk in college women at historically Black colleges and universities. However, the present study is different as it looks at unmarried college-educated African-American women specifically, a group who the literature reveals may experience the most difficulty with the gender-ratio imbalance which may complicate their power in relationships implicating risk for HIV transmission.
Chapter 7

Conclusions

In this chapter, a summary of the overall study is presented, noting strengths, limitations, and implications for future directions in HIV prevention research in college-educated African-American women.

Summary of Findings

Fifty-seven percent of new Human Immunodeficiency Virus (HIV) infections in women in the United States occur in African-American women (CDC, 2012a). Acquired Immunodeficiency Syndrome (AIDS) is currently a leading cause of death for African-American women between the ages of 25 and 34 (CDC, 2009a). The most common method of HIV transmission for African-American women is through heterosexual contact at 83% (CDC, 2009a). As African-Americans comprise only about 13% of the United States population, these statistics indicate a disproportionate rate of infection for African-American women (U.S. Census Bureau, 2008). A number of researchers have noted that HIV prevention efforts aimed at African-American women to date have done little to curb the overall epidemic observed in the African-American community (Hallfors, Iritani, Miller, & Bauer, 2007; Nobles, Goddard, & Gilber, 2009; Weeks et al., 1995; Tillerson 2008). There is a call for prevention and intervention efforts that account for the structural, cultural, psychosocial, environmental, and relational influences on HIV risk behavior. This is the way forward in conducting research and designing interventions that will more adequately address the unique needs of African-American women across the spectrum.

Most of the literature on HIV prevention and intervention in African-American women tends to focus on the risk factors of low-income African-American women with low levels of education. Therefore, intervention planning utilizing results from these studies are geared toward this population, and appear to have less utility for college-educated African-American women unless they are specially adapted for use with this group (Sawyer-Kurian & Wechsberg, 2012). Leaving college-educated African-
American out of the research, literature, and prevention efforts in HIV may result in a false sense of security for women of this group. This can be dangerous as HIV is a leading cause of death in their community.

The findings presented in Paper 1 indicated that unmarried college-educated African-American women ages 25-34 reported that they perceived there to be a limited pool of available male partners, experienced social pressure to get married, sensed feelings of competition among women for male partners, and identified men as having negotiating power in relationships. These findings are of concern as other work has reported that limited availability of heterosexual male partners is a significant predictor of HIV-risk behavior, particularly for African-American women (Wyatt, 1997). If this group of women feels that their age brings added social pressure for marriage, this limited pool of available partners complicates their circumstance. Approximately forty-seven percent of African-American women between the ages of 25-34, have never been married (U.S. Census Bureau, 2009). This represents nearly half of the African-American female population. As the college-educated women of this group appear to be least likely to marry (Davis et. al, 2000; Packer-Williams, 2009), it is likely that they represent a large number of those unmarried women. Thus, it is not difficult to understand why women in our study would report that they felt a sense of competition among African-American women for male partners. This phenomenon is supported by prior literature stating that a limited pool of potential partners may create competition among women for those African-American men who are economically stable and interested in making marital and family commitments (G. E. Wyatt, Forge, N.E., & Guthrie, D., 1998). This results in a relationship dynamic that privileges the men whereby African-American men in high demand by African-American women may have more power to negotiate the type of relationships that they desire because of their limited availability. This dynamic can privilege men’s decision and authority in a relationship. This is of particular importance to the women in our study because the more power available to men in heterosexual relationships, the greater the likelihood that women will have poor health outcomes (Wingood & DiClemente, 2000).
In Paper 2, univariate analysis revealed in our cross-sectional study of college-educated African-American women, the prevalence of non-condom use was high, as 59.8% of respondents reported not using a condom at last sex. Bivariate analyses suggest that when unmarried, college-educated African-American women experience difficulty in establishing heterosexual relationships as a result of the gender-ratio imbalance, they may be more likely to communicate with their male partners regarding condom use and concurrent partnerships. Multivariate analyses reveal that women who reported being involved in committed relationships were less likely to have used a condom at last sex, which is consistent with literature where numerous studies have found that partners involved in a relationship are less likely to consistently use condoms (Macaluso, Demand, Artz, & Hook, 2000; Misovich, Fisher, & Fisher, 1997; Lansky, Thomas, & Earp, 1998; Norris & Ford, 1999; St. Lawrence et al., 1998). While the multivariate results do not support our hypothesis that women with higher PPA Scale scores would exhibit higher HIV risk behavior as demonstrated through less likelihood of condom use at last sex, our findings still support the call for more research in this group of women as more than half of the participants reported not having used a condom at last sex.

The findings presented in Paper 3 Hierarchical logistic regression analysis revealed that of those women who reported not currently being involved in a committed relationship, those who suspected that their male partners also had other sex partners were more likely to have used a condom at last sex. This is encouraging where previous studies have noted that high rates of serial monogamy (Norris & Ford, 1999; St. Lawrence et al., 1998; Adimora & Schoenbach, 2002) and the common practice of man sharing in the African-American community (Morris et al., 2009; Adimora et al., 2006; Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992) increase HIV risk for African-American women. This study presents findings that may suggest that college educated African-American women are able to negotiate their risk within this context.
In both phases of the overall study, participants exhibited high levels of knowledge about transmission of HIV disease. Additionally, the women in this study overwhelmingly reported that they felt they had more decision-making power in the relationship (90%) regarding condom use than their male partner (8%). However, their reported use of condom use at last sex was only 40.2%. This finding raises more questions about motivators for condom use among this group of women. If women of this demographic frequently experience difficulty in establishing relationships, and perceive that male partners prefer non-condom use (Johnson et al., 1992), this may be an additional influence on motivation for communication with male partners about risk reduction.

Limitations

Women involved in both phase of the study were self-selected for participation. There may have been some differences between women who agreed to participate in this study, and those who did not or decided to withdraw their participation. We were unable to identify any patterns of participant withdrawal based on survey items, but we might assume that women with increased sensitivity to certain subject matter in the survey may have chosen to withdraw their participation. The focus group portion of the study in Phase 1 may have presented some limitations, as it may be more advantageous to explore these types of personal and sensitive questions one-on-one in-depth interviews or anonymous survey as women may be more likely to share information on feelings of vulnerability and admit to unsafe sexual practices in these formats than in a group setting. This is evidenced in the data presented where not many women openly admitted to having unprotected sex in our focus group session, but the majority of participants reported non-condom use in the anonymous pen-and-paper questionnaire. It is possible that the open and adamant objections to unprotected sex, as well as the statements regarding intolerance of concurrent partnerships made by some group members may have caused other participants to be reluctant to share and discuss their experiences that could be considered unfavorable in the group setting.
Additionally, classification of the type of partnerships that the women were involved in was based on the perceptions and reports of the women. We do not know how their male partners defined the nature of their relationships. It may be unlikely that there was confusion or deception on the part of our female participants with regard to reporting of relationship type. Yet, we cannot be sure that both members of the dyad viewed their relationships as serious or mutually monogamous, which may create bias in our logistic regression results. Another important limitation of this study is that we did not include a question that addressed women’s perceptions of how their partners felt about condom use. This type of question would have allowed us to make clearer assumptions about how male partners’ condom preference influence decision-making about condom use for these women. Additionally, our study asked participants what their current relationship status was at the time of the survey. This may not necessarily reflect their relationship status at the time of last sex, which may cloud our understanding of the relationship between their relationship status and condom use behavior. Finally, the results of this study are based on self-report, which may be difficult to validate, and cross-sectional survey data. We are able to identify potential correlations between variables and condom use behavior, but cannot establish causality with this type of study design.

**Strengths**

A strength of this study is that it builds on prior qualitative and theoretical work examining the influence of gender-ratio imbalance on the sexual risk for HIV among African-American women. This work in particular fills a gap in the literature by extending the scope of analysis to quantitative methods as well, while also narrowing the focus to within-group differences among African-American women, whereby we examine the unmarried college-educated population between the ages of 25-34, who may be most affected by the gender-ratio imbalance, and represent a group which is often overlooked as research on HIV in African-American women tends to focus on those who have low education and are at low-income status.
Another strength of this study is that we were able to develop a scale with good reliability that demonstrates utility in measuring a cultural construct related to Perceived Partner Availability (PPA Scale). This scale could prove useful for future measurement of this cultural construct in relation to other HIV related health behaviors among unmarried African-American women such as concurrent sexual relationships, actively seeking pregnancy, and communication about sexually transmitted infections and HIV testing.

*Future Directions*

While it may be assumed that higher educational and economic status may position these African-American at decreased risk for HIV transmission, this study reveals that their risk behavior may not stand much to gain as a result of their socioeconomic standing. Study recommendations that focus on limited access to HIV information, testing, and care appear to be of less importance to this group. Sociocultural influences unique to the African-American experience may play a more salient role in the HIV risk behavior of college-educated African-American women. Access to HIV education, condoms, and testing do not appear to be issues for women of this demographic. The structural influences that result in difficulty in establishing productive romantic relationships leading to marriage, while simultaneously exacerbating risk for HIV in this community are often overlooked in prevention research. A more targeted approach is needed to reach this overlooked group. Designing interventions that address the real life concerns of these women, such as communicating about and negotiating condom use while balancing the concern of losing a male partner in a context where partners are hard to come by could prove far more effective in HIV prevention than other measures aimed at their less educated and lower income counterparts (e.g., increasing access to HIV education and testing services, and free condoms). Future research on HIV risk in African-American women should extend analysis to the heterosexual relationships that are largely defined by situations and circumstances in the African-American community, instead of focusing narrowly on behavior without accounting for context. More studies that account for the unique structural, social, and relational aspects of African-Americans are likely to prove
more effective than the individual-level approaches that have seen little utility in curbing the HIV epidemic in this community. In addition to conducting more research to inform targeted intervention African-American college-educated women, other biobehavioral study, such as those based on Life History Theory may be useful. This may require cohort study in which African-American women’s life histories are analyzed relative to their reproductive decisions which may help explain vulnerability to HIV and other STIs.
REFERENCES


Bowleg, L., K. J. Lucas, Tshann, J. (2004). "“The ball was always in his court”: An exploratory analysis
of relationship scripts, sexual scripts, and condom use among African American women.”

Psychology of Women Quarterly 28(1): 70-82.


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