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Condom Use Self-Efficacy and Relationship Factors in Sexual Risk-Taking Among Young Urban African American Women

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Abstract

Young urban African American women are at disproportionately high risk for HIV/STIs and current interventions focusing on individual factors (e.g., condom use self-efficacy) have not been sufficient to address this risk. Recent research suggests that an ecological approach that takes into account broader social and relationship factors may be more effective in meeting the needs of this population. The present study examined several relationship-level factors, including relationship power, avoidance motives for sex, and relationship commitment, and their potential interaction with the individual-level factor of condom use self-efficacy in predicting sexual risk-taking behaviors in a community sample of African American women aged 18-25 (N =132). The current study additionally considered the role of young women's ambivalence around condom use, through descriptive analyses. Out of the three relationship variables, only relationship power was found to interact with condom use self-efficacy to predict sexual risk. In addition, although not specifically hypothesized, relationship commitment predicted condom use over and above the variance accounted for by condom use self-efficacy, suggesting that relationship commitment may be particularly important in determining condom use for this population. Further, participants expressed ambivalence about condom use during their last protected and unprotected sexual encounters, suggesting that women do not always want to use condoms. Discussion of the results highlights the importance of considering relationship factors and ambivalence toward condom use in sexual risk-taking among young urban African American women. Limitations and implications for prevention programming are considered.

Condom Use Self-Efficacy and Relationship Factors in Sexual Risk-Taking Among Young Urban African American Women

The African American community has been extremely hard hit by the HIV/AIDS epidemic of recent decades. At particular risk are certain vulnerable groups within this population, including adolescent girls and young women. While African American women represent just 13% of all women in the United States, they represent a disproportionate 64% of women living with HIV/AIDS (Centers for Disease Control and Prevention [CDC], 2008). The incidence rate of new HIV cases among African American women each year is 15 times that of White women and three times that of Hispanic women (CDC, 2011). And despite recent advances in treatment and prevention, AIDS is still a significant cause of death among African American women, who are 21 times more likely to die from AIDS than non-Hispanic White women (National Women's Health Information Center [NWHIC], 2010). In fact, AIDS is currently the third leading cause of death for African American women aged 35-44; many of these women initially became infected at a younger age (CDC, 2011).

The most common method of HIV transmission for African American women is "high risk heterosexual contact," defined by the CDC as "heterosexual contact with a person known to have or to be at risk for HIV infection" (CDC, 2010, p.1). Roughly 80% of the African American women who are infected with HIV contracted the virus in this way (DeCarlo & Reznick, 2009). Women are considered at greater risk than men for HIV infection through unprotected vaginal intercourse, as the virus has greater opportunity to enter a woman's bloodstream (CDC, 2008). Because of the higher proportion of people with HIV in low-income communities relative to higher income

communities, each unprotected sexual encounter poses a significant risk of infection for low-income African American women (Corneille, Tademy, Reid, Belgrave, & Nasim, 2008). Moreover, an African American woman may not always be overtly aware of her partner's HIV status or of the level of risky behavior in which he engages, such as using injection drugs or having other concurrent sexual partners. Such behaviors may substantially increase the risk of HIV transmission (DeCarlo & Reznick, 2009). Further, HIV risk is only one of a host of risks faced by low-income African-American women every day; at times risks to financial or emotional well-being by refusing unprotected sex may actually outweigh the health risks posed by unprotected sex (Sobo, 1993).

Adolescent and young women under the age of 25 have been identified as a group that is especially vulnerable to contracting HIV and other sexually transmitted infections (STIs) due to patterns of inconsistent condom use and multiple sexual partners that are characteristic of sexual behavior in this age group. Adolescent girls and young women may be particularly vulnerable to sexual risk-taking because they have not yet developed higher level cognitive and social decision-making skills and have had only limited experiences to help guide their behavior (Robinson, Holmbeck, & Paikoff, 2007). Despite comprising only 25% of the sexually active population, young people under 25 account for nearly half of all new STIs in the U.S. each year, with women and minorities disproportionately represented (CDC, 2009). Given that STIs often go unreported and are underdiagnosed especially among young people, the rates are likely even higher than estimates would suggest (Cates, Herndon, Schulz, & Darroch, 2004). Young people are also less likely to seek out, or have access to, testing and treatment for STIs than are older individuals (Cates et al., 2004). This is particularly concerning because many STIs

become more hazardous if left untreated, which has serious consequences for young people's long-term health and increases the demand on the entire health care system (Cates et al., 2004; Chesson, Blandford, Gift, Tao, & Irwin, 2004). In addition to STIs, young women are more often left to bear the burden of unwanted pregnancies that occur in the context of unprotected sex than are young men (Impett, Breines, & Strachman, 2010).

Moreover, young African American women are at an even higher risk for contracting HIV and STIs than are young White and Hispanic women, as they typically report an earlier age of first sexual intercourse and more lifetime sexual partners, leading to greater overall opportunity for exposure (Espinosa-Hernández & Lefkowitz, 2009). Among young African American women, gonorrhea rates are 16 times higher than among White women, syphilis rates are 15 times higher, and chlamydia rates are eight times higher (CDC, 2009). African American adolescent girls also tend to report higher rates of "involuntary" first intercourse than do White and Hispanic girls (Townsend, Thomas, Neilands, & Jackson, 2010). Given that individuals who perpetrate sexual aggression or violence are more likely to participate in other forms of risk-taking, including unprotected sex and drug use, such findings raise additional concerns for the safety of young African American women (Peterson, Janssen, & Heiman, 2010; Wu, El-Bassel, Witte, Gilbert, & Chang, 2003).

Despite the disproportionately high risk for HIV and STIs among young urban African American women, research on sexual risk-taking has, thus far, done an inadequate job of identifying contributing factors for sexual risk-taking in this community. Studies in this area have typically utilized predominantly White middle

class college student samples, limiting their generalizability to people of color and those from different socioeconomic backgrounds. Worse, this bias in the research may have the effect of normalizing the behaviors and experiences of middle class White individuals, while classifying the experiences of other groups as "deviant" or "abnormal" (Stephens & Few, 2007).

The literature has also primarily focused on individual risk factors for HIV and STIs, including certain personality traits and attitudes, rather than contextual and community factors, such as the economic and political circumstances in which sexual relationships take place (Bowleg, Lucas, & Tschann, 2004). Societal and relational influences may play a more important role than individual-level factors in explaining the disproportionate risk for groups such as African American women who have historically experienced unequal access to power and resources in society (Bowleg et al., 2004). The 2011 Current Population Survey, conducted by the Census Bureau, documented that 27.4% of African Americans currently live below the poverty threshold--defined as a household income of under $11,139 for an individual or under $22,314 for a family of four--more than double the rate for non-Hispanic White Americans (DeNavas-Walt, Proctor, & Smith, 2011).

Among the challenges African American women face, in addition to systemic poverty, are racism, sexism, community violence, unemployment, substance use, elevated incarceration rates, as well as inequitable access to health care, education and housing. These social factors appear to be especially critical for African American women's sexual risk, given recent data that suggests that African Americans are actually more likely to use condoms during intercourse than White and Hispanic individuals, perhaps in response

to public health efforts targeted at this population in recent years (Reece et al., 2010). Additionally, research has shown that African American young adults remain at higher risk for STIs even when their sexual behavior is not "high risk" compared to their peers (Hallfors, Iritani, Miller, & Bauer, 2007). African American women are also more likely than White women to have been tested for HIV in the past 12 months (DeCarlo & Reznick, 2009). Taken together, these results imply that the increased risk among this population is not related primarily to individual risk behaviors and is much more likely the product of a combination of larger societal and interpersonal-level factors.

African American women's relationships and sexual behaviors are inherently rooted in and shaped by the context of slavery and the history of institutionalized racial and economic oppression in American society. Including individuals who have never married, as well as those who are separated, divorced, or widowed, 65% of all African American adults are currently unmarried (Johnson & Staples, 2005). African Americans are the least likely of all ethnic groups to get married, remain married, or to remarry (Davis, Williams, Emerson, & Hourd-Bryant, 2000). Thus, social forces, including stressors brought on by living in poverty, appear to profoundly affect African American relationships. HIV and STI prevention and treatment efforts in this community must be sensitive to these issues (Bowleg et al., 2004). It is important to note, however, that while a culturally sensitive approach to treatment may best meet the needs of historically disenfranchised groups such as African American women, a recent analysis by the CDC found epidemic rates of HIV, regardless of race, among those living in high-poverty urban areas (CDC, 2010). These data suggest that African American women appear to be indirectly vulnerable to HIV and STI as a result of the disturbingly high rates of poverty

and societal disadvantage in this population, rather than directly as a result of their race or ethnicity.

The proposed study will address several factors that may influence young African American women's effectiveness and motivation in negotiating for condom use with their male partners. Individual-level factors, including self-efficacy for condom use, which has been suggested as an important factor in sexual risk-taking, may interact with more interpersonally-focused factors such as gender-based power dynamics, avoidance motives for sex, and relationship commitment, in ways that will be predictive and informative for designing HIV and STI intervention programming that better serves the needs of young African American women. A second important aim of this study will be to explore young women's ambivalence about condom use. Much of the literature on self-efficacy and relationship variables as predictors of condom use assumes that women always unambivalently want to use condoms, whereas, in reality, women's attitudes toward condom use may be far more complex and nuanced. Women may well endorse reasons for both wanting and not wanting condoms to be used during sexual interactions. Women's ambivalence toward condom use may theoretically help to explain the interactions between condom use self-efficacy and the interpersonal variables of relationship power, avoidance motives for sex, and relationship commitment, in predicting condom use.

Condom Use Self-Efficacy

A substantial body of literature has examined the individual-level variable of condom use self-efficacy in predicting condom use behavior. The concept of self-efficacy arises out of Bandura's social cognitive theory, and refers to an individual's

"conviction that one can successfully execute the behavior required to produce the [desired] outcomes" (Bandura, 1977, p. 193). Perceived self-efficacy influences "how people feel, think, motivate themselves and behave" in a wide range of life domains (Bandura, 1994, p.71). Condom use self-efficacy, then, refers to "the belief that one is both capable of and likely to use condoms in sexual situations" (Farmer & Meston, 2006, p. 313). Findings from the majority of studies in this area have demonstrated that stronger self-efficacy beliefs are indeed associated with increased levels of condom use (Farmer & Meston, 2006). Similarly, more positive attitudes toward condoms and a greater degree of confidence in one's ability to use condoms also appear to predict condom use frequency and consistency (Sterk, Klein, & Elifson, 2003). Self-efficacy for condom use may be important because those with stronger self-efficacy skills are more likely to initiate condom use discussions with a partner and be more persistent in attempts to use condoms, "trying multiple times if necessary" (O'Leary, Jemmott, & Jemmott, 2008, p. S183).

There is some debate in the literature, however, as to whether condom use self-efficacy leads to actual behavior change in high-risk populations. A recent meta-analysis by Casey, Timmerman, Allen, Krahn, and Turkiewicz (2009), which included 134 studies focused on condom use self-efficacy, found mainly positive correlations between condom use self-efficacy and self-reported condom use, with the highest correlations among college student samples (Casey et al., 2009). Overall, however, Casey et al. (2009) found far stronger associations between condom use self-efficacy and the intention to use condoms (average r =.452) than for the relationship between self-efficacy and actual condom use behavior (average r =.199).

The lowest correlation between self-efficacy beliefs and condom use found in the Casey et al. meta-analysis was among high-risk individuals seeking treatment in STD clinics. The authors pointed out that this presents a predicament wherein those who may be most in need of skills to reduce sexual risk behaviors feel most helpless to overcome that risk (Casey et al., 2009). They noted that, as opposed to other areas in which attitudes, intentions and behaviors may be controlled by an individual, in order for condom use self-efficacy to result in actual behavioral change, there must be "a joint decision between sexual partners" (Casey et al., 2009, p. 67). Condom use necessarily exists in the context of the relationship between partners, where skills such as negotiation and compromise become paramount (Casey et al., 2009). Far from being an individual decision, relational and situational factors play a large role in determining whether and how condoms get used in social interactions. Ultimately, a woman may have very high self-efficacy beliefs in her ability to use condoms and strong condom use intentions, but give in when facing a partner's disapproval, or lose her ability or willingness to negotiate for condom use under the influence of alcohol or drugs (Casey et al., 2009).

These findings have implications for studying the concept of condom use self-efficacy with high-risk groups, such as young urban African American women. While some researchers have found higher levels of condom use self-efficacy among younger African American women than among older African American and non-minority women (Sterk et al., 2003), others have argued that self-efficacy may be an inadequate variable to explain African American women's values and socioeconomic circumstances (Soet, Dilorio, & Dudley, 1998). Soet et al. (1998) argued that self-efficacy may be too "individualistic and rational" a construct, failing to capture the more interpersonal aspects

of African American culture as well as the stressors brought on by economic and social marginalization (p. 29). In their study with a sample of White and African American college women, condom use self-efficacy was a significant predictor of condom use for White women, but not for African American women (Soet et al., 1998). In addition, Younge, Salem, and Bybee (2010) found that African American women's cultural beliefs, including fatalism and optimistic bias, which may be adaptive and contribute to resiliency in other areas, were associated with low perceived risk for HIV, which could contribute to decreased condom use and decreased self-efficacy if women do not feel vulnerable to HIV or empowered to prevent HIV infection.

Similarly, Crosby et al. (2003) failed to find a connection between self-efficacy and condom use in a sample of high-risk, low-income African American adolescent women. Interestingly, attitudes toward condom use and knowledge about STI and HIV prevention also failed to predict subsequent condom use among the young women in their sample and the results with respect to sexual communication were weak (Crosby et al., 2003). These authors concluded that intervention programming for this population should prioritize discussions of peer norms and ways to combat barriers to condom use, such as partner resistance, rather than solely increasing self-efficacy and fostering more positive attitudes to condom use (Crosby et al., 2003). Research has also pointed to the negative effects of childhood neglect (Sterk et al., 2003), substance use (Brien, Thombs, Mahoney, & Wallnau, 1994), negative affect (Kiene, Tennen, & Armeli, 2008), and psychological distress (Seth, Raiji, DiClemente, Wingood, & Rose, 2009) in decreasing condom use self-efficacy, all of which have been associated with living in poverty, which in itself increases HIV and STI risk. In order to best address the complex decision-making

processes around condom use in sexual encounters for young urban African American women, it will be important to understand how interpersonal factors, such as relationship power dynamics, interact with self-efficacy to predict sexual risk-taking.

Relationship Power

As romantic and sexual relationships are rooted in the prevailing power hierarchy inherent in society, so too are the negotiations between partners that occur around safer sex decisions and condom usage. An increasing body of literature has suggested that the gender role and power dynamics that exist in heterosexual relationships affect women's ability and desire to successfully negotiate for condom use (Pulerwitz, Amaro, DeJong, Gortmaker, & Rudd, 2002). At the present time, the most effective way of preventing the transmission of HIV and STIs is through use of the male condom (Saul et al., 2000). Studies suggest that the decision to use a condom presents as a different set of behaviors for men and women. Because men ultimately wear male condoms, women who wish for a condom to be used in a given sexual encounter must engage in behaviors such as initiating discussions around condom use, persuasion, or sex refusal, each of which may have particular costs depending on the power dynamics in a relationship (Bowleg et al., 2004). While research has largely demonstrated that effective communication about condom use predicts safer sex practices (Otto-Salaj et al., 2008), communication around sexual issues may be complicated for young women. Growing up in a patriarchal society, girls learn from an early age to subjugate their own needs in order to maintain close relationships (Impett, Schooler, & Tolman, 2006). Further, within the "sexual double standard," sexual pleasure and control over relationships is deemed the privilege of men, while women are encouraged to focus on maintaining relationships and emotional

intimacy, often at the expense of their own needs (Fasula, Miller, & Wiener, 2007).

Studies have demonstrated that power asymmetry in relationships may be especially robust during adolescence and young adulthood, when individuals tend to subscribe to more traditional gender roles, in which men have more power, as part of their identity development process (Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008). Adolescent girls and young women may internalize the power imbalances in their relationships and become less empowered to negotiate for condom use (Teitelman et al., 2008). Young women may also be especially susceptible to "silencing" or disregarding their own needs, including avoiding unwanted pregnancy and STIs, in service of their partners' needs, or in order to avoid conflict (Impett et al., 2006, p.132). As further evidence of this dynamic, young women are particularly likely to experience negative outcomes from sex (including STIs, unplanned pregnancies, and relationship abuse) in relationships with a greater male-to-female age differential, which enhances the power differential in those relationships (Seal et al., 2008).

Many recently developed HIV intervention programs are designed to teach high risk women skills in negotiating for condom use and becoming more active in protecting themselves from the health risks of unprotected sex, including developing self-efficacy (Saul et al., 2000). This goal is well intentioned and important, and such interventions have been effective within a variety of populations (Otto-Salaj et al., 2008). However, these interventions rest on the assumption that communication efforts will be well received by partners and effective in persuading partners to use condoms (Otto-Salaj et al., 2008). This is not always the case.

African American women face a unique set of emotional challenges when

negotiating for condom use with their male partners. Given the many daily stressors associated with living in poverty, personal health risk may not be low-income young African American women's primary focus in sexual interactions. These young women may put other relationship maintenance motives above their own motives for health protection, including avoiding loneliness, pleasing a partner, or ensuring financial support (Jones & Oliver, 2007). Another significant factor that may contribute to power imbalances in contemporary African American relationships is the gender ratio disparity brought on by the high rates of incarceration and premature mortality among African American men. As a result of the gender ratio imbalance in many African American communities, men may exert more power over romantic relationships and sexual behaviors (Corneille, Zyzniewski, & Belgrave, 2008, p. 219). In a context in which eligible African American men are highly sought after by women, they may be free to have more sexual partners, less likely to enter into monogamous relationships, and be required to offer fewer "incentives" to their sexual and relationship partners (Oser et al., 2008, p. 484). African American women may subsequently be more likely to engage in sexual risk behaviors if they are focused on meeting their partners' needs in sexual encounters, at the expense of their own needs (Oser et al., 2008). Thus, women may agree to unprotected sex because they worry about losing the relationship if they place demands on their partners. Also, if women are financially dependent on or have children with their partners, they may be even more willing to sacrifice their own health and safety for the sake of their families (Bowleg et al., 2004).

An additional form of gender-based power imbalance may occur in relationships in which there is intimate partner violence. Women in abusive relationships show

significantly lower rates of condom use and tend to be more fearful of their male partners' reactions to their initiation of discussions around condom use (Perrino, Fernandez, Bowen, & Arheart, 2006). Physical and emotional abuse may lead women to perceive themselves as lacking power to adequately protect themselves, reducing feelings of efficacy; further, they may risk additional abuse if their partners see their request for a condom as a signal of a woman's infidelity or as an accusation of infidelity on the part of the man (Wu et al., 2003). Teitelman et al. (2008) found that African American and Latina adolescent girls who had experienced intimate partner violence (including physical and/or emotional abuse) were significantly less likely to use condoms consistently than girls who had not experienced such abuse. Other evidence suggests that perpetrators of intimate partner violence may be more likely to engage in other risky behaviors, including having unprotected sex with multiple partners and intravenous drug use (Wu et al., 2003). Given that African American women are more likely than White women to be in relationships in which there is intimate partner violence, these findings suggest that research targeting the imbalance of power in relationships may be especially important for this population (Wu et al., 2003).

Avoidance Motives for Sex

A second relational factor that may interact with self-efficacy to inform condom use is avoidance motives for sex. It has been well-established in the literature that individuals engage in sexual behaviors for a wide variety of reasons and to meet a range of needs which go beyond simple disease avoidance or procreation (Cooper, Shapiro, & Powers, 1998). Cooper et al. (1998) argued that, in order to alter deeply entrenched and problematic patterns of sexual behavior, addressing the functions that sex serves in an individual's life (as well as the antecedents and consequences of certain types of sexual

interactions) may be instructive. These authors further suggested that particular motivations for sex may be correlated with specific dysfunctional patterns of sexual behavior, including unprotected sex (Cooper et al., 1998); understanding these motives and how they interact with self-efficacy may inform prevention and treatment efforts.

It has been postulated that there are two separate systems that underlie sexual behavior: the approach system, which involves the pursuit of pleasure or positive end-states, and the avoidance system, which involves the avoidance of pain and negative end-states (Cooper, Talley, Sheldon, Levitt, & Barber, 2008; Impett, Peplau, & Gable, 2005). This approach/avoidance theory of sexual motivation is based on a broader theory of human behavior, in which approach and avoidance motives are seen as part of two separate neurological systems: the behavioral inhibition system (BIS), an avoidant system that controls negative emotions and is sensitive to punishment cues, and the behavioral activation system (BAS), an approach system that is responsive to rewards and controls the way positive emotions are experienced (Cooper et al., 2008). In relation to sexual motivations, approach motives are centered on obtaining positive sexual outcomes, including pursuing physical pleasure, feeling attractive, or having an intimate connection with a partner. Avoidance motives for sex, in contrast, are centered on avoiding negative outcomes, and include attempts to cope with negative emotion, ensuring a partner does not lose interest in a relationship, or attempting to avoid feelings of inadequacy or social judgment (Impett et al., 2005). Approach motives for sex have been correlated with more positive, satisfying, and frequent sexual experiences, while avoidance motives are associated with less frequent, less rewarding sexual experiences (Cooper et al., 2008). In a daily experience study conducted by Impett et al. (2005), participants who reported

having sex for avoidance motives on a given day also reported more negative emotions, higher relationship conflict, and less positive relationship well-being.

The literature suggests that avoidance motives tend to be more highly correlated with sexual risk-taking experiences than approach motives, as having sex to avoid a negative outcome or negative emotional state may feel more imperative in a given situation than other goals, such as self-protection (Cooper et al., 2008). Individuals who have sex for avoidant reasons may choose immediate relief from a negative mood state over the long-term costs of sexual risk-taking. This desire for immediate relief may outweigh feelings of self-efficacy in determining condom use; feeling capable of using a condom may be irrelevant if condom use negotiation will interfere with the woman's ability to avoid negative emotions through sex, avoid relationship discord, or avoid judgment from her partner. In addition, avoidance is thought to be a generally weak emotion regulation strategy; individuals who rely on avoidance motives for sex may fail to develop a rational guideline for behavior, leaving them vulnerable to impulsive decision-making and risky sexual behaviors (Cooper et al., 2008).

Cooper et al. (2008) have argued for increased study of motives for sex in the context of sexual relationships, particularly for women, who are socialized from an early age to be interpersonally-focused. As sexual relationships are dyadic in nature, relationship status and perceptions of a partner's motives for sex can greatly affect an individual's own sexual motives (Cooper et al., 2008). Illustrating this point, Cooper, Agocha, and Sheldon (2000) found that personal approach and avoidance motives for alcohol use accounted for 27% of an individual's alcohol-related outcomes, while approach and avoidance motives for sex accounted for just 6% of sexual behavior

outcomes. This may help to explain why interventions designed to target injection drug risk in low-income communities have been more successful on the whole at changing behavior than those addressing sexual risk (Sterk et al., 2003). Cooper et al. (2000) suggested that sexual behavior is naturally a more interactive and interpersonal process than a behavior such as substance use; intrapersonal processes cannot fully explain the complex decision-making processes that occur between partners related to sexual behavior.

Of particular concern for predicting sexual risk-taking in young women, Cooper et al. (2008) found, in a study of the interactive effects of partner motives, that in couples in which a female partner is high in sexual partner approval motives, the male partner's motives for sex more closely predicted sexual outcomes. The motive of having sex for the purpose of partner approval has been most associated in the literature with sexual risk-taking, particularly a decrease in birth control use and increase in unplanned pregnancies (Cooper et al., 2008). Thus, if a male partner were averse to condom use, it appears likely that a female partner high in partner approval motives might be persuaded to engage in unprotected sex, even if she had a preference for using condoms.

Relationship Commitment

The above analysis of condom use self-efficacy, relationship power dynamics and motives for sex has demonstrated thus far that sexual risk-taking operates in a relational context; furthermore, a woman's level of commitment to a romantic relationship may deeply affect her motivation for using condoms even when she perceives herself to be efficacious at requesting and using condoms. While the construct of relationship commitment has been widely studied, this concept has rarely been

examined in the context of HIV and STI risk behaviors; the intimate relationship literature and the literature around sexuality, despite obvious connections, have generally been quite separate. It has been well-established, however, that women are less likely to use condoms in steady relationships (as opposed to casual sexual encounters), even when they do not know their partner's HIV status or level of risk behaviors, including injection drug use and sex with other partners outside the relationship (Tucker, Elliott, Wenzel, & Hambarsoomian, 2007). Women in relationships, compared to women engaging in "casual" sexual activity, may be more likely to use other forms of birth control, desire greater physical intimacy which they may perceive to be negatively affected by condom use, or simply feel more secure and trusting in their sexual relationship. Adolescents and young adults may be at increased HIV/STI risk in part because relationships in this age range go from casual to "established" relatively quickly; young women may feel a sense of trust or intimacy in a relationship and stop being concerned about their own HIV/STI risk before this is truly warranted (Bralock & Koniak-Griffin, 2007).

The Investment Model, developed by Rusbult (1980) is based on interdependence theory (Kelley & Thibaut, 1978) and offers a useful framework to examine issues related to commitment in close relationships. Commitment is thought of as the intention to persist in a relationship over time, and level of "psychological attachment" to the relationship (Rusbult, Martz, & Agnew, 1998, p. 359). Rusbult's model has predicted commitment across romantic relationship types, including dating and marital relationships, heterosexual and same sex relationships, and across different cultures (Le & Agnew, 2003). In the Investment Model, relationship commitment is theorized to be comprised of three key constructs that strengthen desire to continue in a given

relationship: satisfaction level, quality of alternatives, and investment size (Rusbult et al., 1998). Satisfaction level involves an individual's level of positive feelings about a relationship and the extent to which a partner is meeting the individual's relational needs, including needs for intellectual connection, sexual attraction, and emotional connection (Rusbult et al., 1998). Quality of alternatives refers to the extent that an individual feels that there are other more attractive and available options outside the given relationship that might meet one's needs, including other potential romantic partners, but also including support from friends and family or being single (Rusbult et al., 1998). Finally, investment size refers to the amount of "resources" an individual has devoted to a relationship. These resources could be mutual friends, extended family connections, children, shared financial investments or material possessions, as well as the degree to which an individual's personal identity and emotional life is tied up in a relationship (Rusbult et al., 1998). Rusbult et al. (1998) proposed that, as the importance and scale of one's investment grows, the costs of leaving the relationship grow as well, such that staying in the relationship becomes the more attractive option. Each of the three "bases of dependence" has been demonstrated to contribute unique variance to the prediction of relationship commitment, with satisfaction and investment being positively related, and quality of alternatives negatively correlated with commitment (Rusbult et al., 1998).

A small but growing body of literature has looked at the possible use of the Investment Model in predicting sexual risk-taking behavior. Within the context of a close relationship, individuals may feel a sense of trust and reduced perception of risk based on feelings of commitment to the relationship; they may also fear creating conflict or tension in the relationship if they bring up condom use, which could threaten the

relationship's stability (Tucker et al., 2007). Also, once individuals in relationships develop trust in one another, they may ignore or fail to pay attention to contradictory information that might imply increased risk (Misovich, Fisher, & Fisher, 1997). Further, motivation for condom use for both partners may simply become reduced as the focus shifts from the enhancement of the self to the enhancement and maintenance of the relationship (Misovich et al., 1997).

Studies have shown that, among African American women, as with other groups of women, condom use is much more common in sexual encounters with casual partners than within committed relationships (Misovich et al., 1997). Particularly disturbing is that this finding holds for women who are at high risk for HIV, including those who are having sex with an injection drug-using partner (Misovich et al., 1997). Tucker et al. (2007) found that relationship commitment predicted unprotected sex within a sample of low-income urban women better than a number of other factors, including self-efficacy, frequency of communication about condoms, assessment of personal HIV risk, and perceptions of a partner's monogamy. One reason that relationship commitment may be especially predictive of unprotected sex within young urban African American women's relationships is the lack of potential available alternatives. A woman's desire to broach a potentially challenging or off-putting topic such as condom use may be especially compromised by fear of losing a partner to other women (Breny Bontempi, Eng, & Quinn, 2008). Further, in some African American communities, a norm exists wherein men are able to have multiple concurrent relationships, perhaps because women would rather have a non-monogamous partner than none at all (Breny Bontempi et al., 2008). These findings suggest that, particularly for young African American women,

relationship commitment may play a key, and understudied, role in moderating the effect of condom use self-efficacy on unprotected sex.

Limitations in Research on Women's Condom Use

In reviewing this literature, it is important to note that the vast majority of research into women's sexual risk-taking uses frequency or proportion of condom use as a measure of sexual risk. Often this research seems to assume that women *want* to use condoms in all situations and are hampered only by factors such as male partners' pressure to forego condom use, low self-esteem, or low self-efficacy. For example, when researchers examine self-efficacy in relation to women's condom use, the assumption is that women want their partners to wear a condom but might be impeded by a lack of confidence in their ability to successfully negotiate for condom use. Similarly, when researchers examine relationship factors in relation to women's condom use, the assumption often is that the women want their partners to wear a condom but might be hesitant to request or insist on condom use due to relationship factors.

However, a small number of studies suggests that there are times when some women do not want to use condoms and other times when women might feel ambivalent (i.e., hold simultaneous reasons for wanting and not wanting condom use) (Bowleg et al., 2004; Margillo & Imahori, 1998). Reasons that women sometimes give for not wanting to use condoms include not wanting condoms to interfere with sexual pleasure or intimacy in relationships or not perceiving themselves to be at risk for HIV (Bowleg et al., 2004). In fact, in a qualitative study in which 14 young African American women in relationships were interviewed about their motivations and attitudes toward condom use, Bowleg et al. (2004) found that the majority of women in their sample actually reported

not wanting to use condoms with their main partners. Other research suggests that there is significant within-person variability in the desire to use condoms. In a 30-day daily diary study, Kiene et al. (2008) found that young people's attitudes about and intentions to use condoms, as well as their condom use self-efficacy, shifted considerably from day to day and predicted instances of condom use. Thus, assuming that women are always motivated for condom use is likely to miss quite a bit of complexity about women's attitudes toward condom use.

While few studies have examined women's ambivalence about condom use directly, women's basic ambivalence about having sex has been explored in recent literature. Peterson and Muehlenhard (2007) demonstrated that women are often ambivalent about having sex and, when given the opportunity, will endorse multiple reasons for both wanting and not wanting sex. Further, these authors suggested that a dichotomous view of sex as either wanted or unwanted stifles women's ability to express their ambivalence about sex (Peterson & Muehlenhard, 2007). Women in their sample endorsed degrees of "wantedness" along a continuum. Women may also want only certain aspects of sex; for instance, they may want feelings of pleasure associated with sex, but not want the consequences of sex (Peterson & Muehlenhard, 2007). Similarly, it is likely that women have ambivalence about condom use and have reasons for both wanting and not wanting to have sex using a condom (which may be related to both individual and relationship variables).

Further, consenting to sex is conceptually different from wanting sex. Peterson and Muehlenhard (2007) illustrated that individuals often consent to sex that is unwanted (e.g., to please a partner), and do not consent to sex that is wanted (e.g., in situations of

"acquaintance rape"). Regarding unprotected sex, a woman may not want to have sex without a condom, but still consent to unprotected sex. Conversely, she may want to have sex very much, but not give her consent to unprotected sex. One objective of the current study is to fill in the gap in the literature on condom use by specifically assessing women's ambivalence about condom use and allowing women to describe instances in which they wanted to use condoms and in which they did not want to use condoms. In addition, a greater appreciation of women's ambivalence about condom use may contribute to an understanding of the ways individual and relationship factors interact to shape women's decisions around condom use.

The Present Study

The present study examined a) the ways that individual condom use self-efficacy interacts with relational factors to predict unprotected sex in a sample of young urban African American women and b) young urban African American women's ambivalence to condom use. The first major aim of the study was to determine the extent to which relationship factors moderated the association between condom use self-efficacy and unprotected sex. It was predicted that condom use self-efficacy would vary in its relationship to condom use based on differences in relationship power, avoidance motives for sex, and relationship commitment. Relational factors were hypothesized to be particularly important for the women in this sample, given the significance of interpersonal and social factors in the lives of urban minority women. See Figures 1-3 illustrating the hypothesized relationships among the key variables in the study.

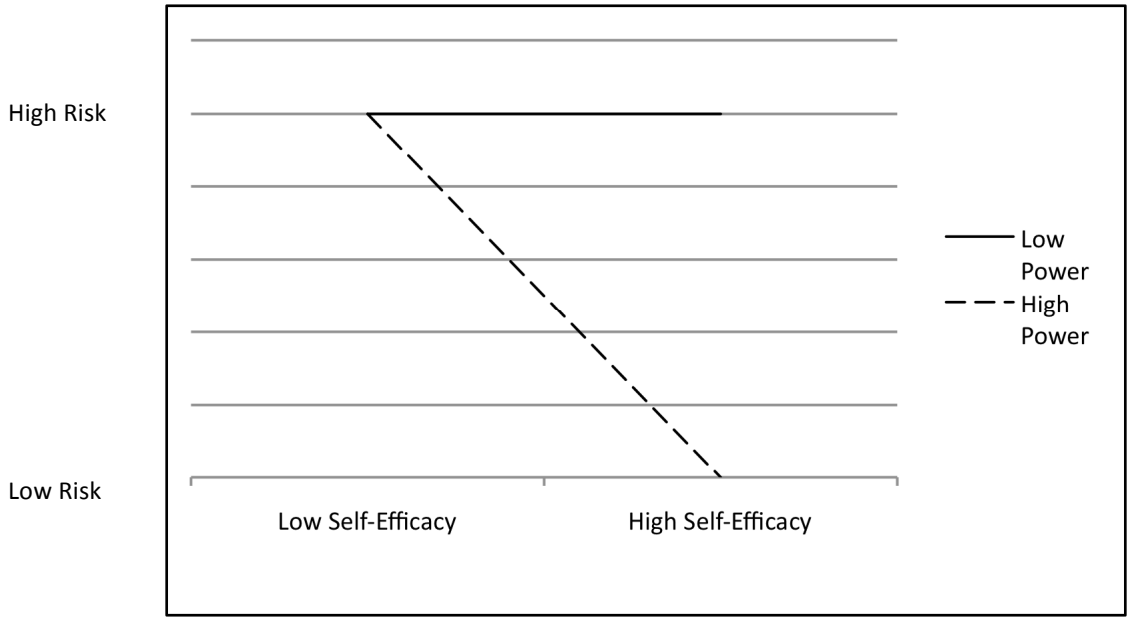

Figure 1. Model of the hypothesized relationship between condom use self-efficacy and sexual risk (i.e., rates of unprotected sex), moderated by relationship power.

Figure 2. Model of the hypothesized relationship between condom use self-efficacy and sexual risk (i.e., unprotected sex), moderated by avoidance motives for sex.

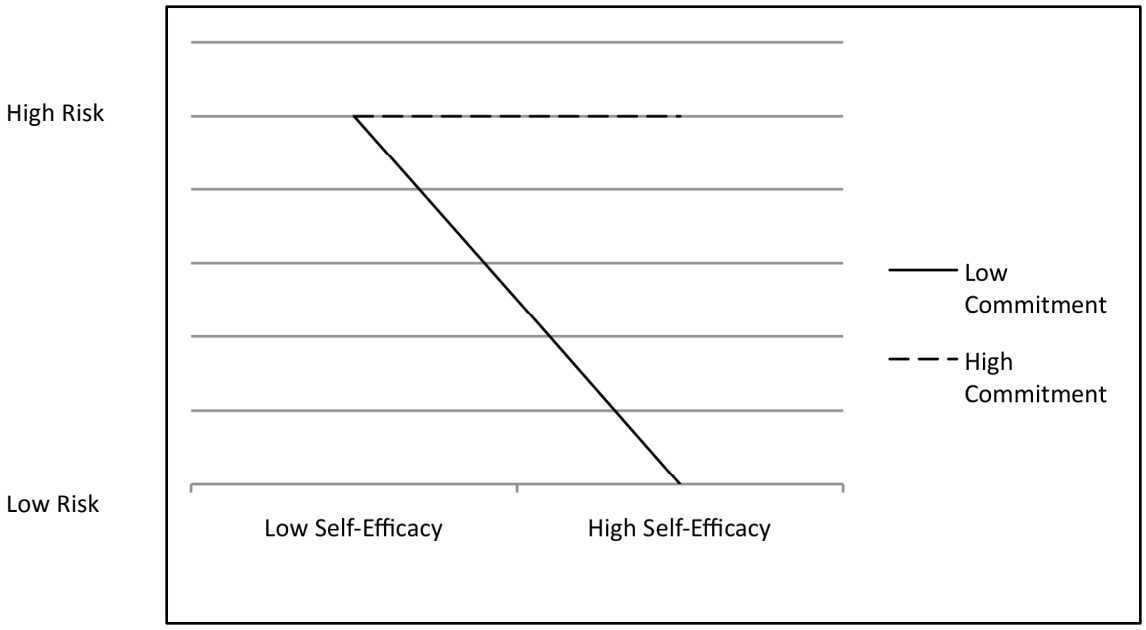

Figure 3. Model of the hypothesized relationship between condom use self-efficacy and sexual risk (i.e., unprotected sex), moderated by relationship commitment.

Three different outcome variables were selected for these analyses. First, the analyses were run using a dependent variable that was a measure of unwanted unprotected sex, defined as number of instances in the past six months when women consented to unprotected sex when they wanted to use condoms and their main partners did not want to use condoms; this variable was chosen because it was believed that self-efficacy and relationship variables might be particularly relevant to instances of risk-taking in which women *desire* condom use but feel unable to challenge their partners' wishes. However, because this is a relatively novel way to look at women's condom use behaviors, analyses were also run using two more commonly used outcome variables for sexual risk. Because of the difficulty inherent in measuring condom use, researchers generally recommend utilizing multiple condom use measures and comparing across

these measures (Noar, Cole, & Carlyle, 2006).

The additional outcome variables utilized were 1) the proportion of times in the past six months in which condoms were used with a main partner out of all occasions of sexual intercourse; and 2) reported percentage of consistent condom use with a main partner during the past six months. Proportion and percentage of condom use were both used as outcome variables although they are closely related constructs. While condom use proportion is thought to be a more exact measurement of condom use behavior, out of concern that participants might struggle to recall both the specific number of times they had sex and the number of times they had sex using condoms with their main partners in the past six months, condom use percentage was also included. Condom use percentage is considered a more gross estimate of condom use than condom use proportion.

The second major aim of the current study was to analyze the extent to which women are ambivalent about condom use. Descriptive analyses were conducted to examine the degree to which women wanted to use condoms during the last time they had protected and unprotected sex, as well as their reasons for wanting and not wanting to use condoms in these situations. It was hypothesized that women would endorse reasons for both wanting and not wanting to use condoms.

The specific hypotheses were:

1. Relationship power would moderate the relationship between condom use self-efficacy and the three measures of condom use. When relationship power was high, it was predicted that self-efficacy for using condoms would be associated with unprotected sex, such that lower self-efficacy would predict greater frequency of unprotected sex; however, when power was low, it was predicted

that rates of unprotected sex would be relatively high regardless of the level of condom use self-efficacy.

2. Avoidance motives for sex would moderate the relationship between condom use self-efficacy and the three measures of condom use. When avoidance motives were low, it was predicted that self-efficacy for using condoms would be associated with unprotected sex, such that lower self-efficacy would predict greater frequency of unprotected sex; however, when avoidance motives were high, it was predicted that rates of unprotected sex would be relatively high regardless of the level of self-efficacy.
3. Relationship commitment would moderate the relationship between condom use self-efficacy and the three measures of condom use. When commitment level was low, it was predicted that self-efficacy for using condoms would be associated with unprotected sex, such that lower self-efficacy would predict greater frequency of unprotected sex; however, when commitment level was high, it was predicted that rates of unprotected sex would be relatively high regardless of the level of self-efficacy.
4. Women would exhibit ambivalence about condom use based on quantitative measures of condom use wantedness and based on open-ended responses to questions about reasons for wanting and not wanting to use condoms.

Method

Participants. African American women aged 18-25 were recruited for the study in three ways: 1) through flyers advertising the study posted in the community; 2) through online classified (e.g., Craigslist, Facebook) and local newspaper advertisements

(e.g., St. Louis American); and 3) through in-person solicitation by the principal investigator and trained undergraduate research assistants, who visited relevant community sites to recruit participants to complete the study in-person. Flyers and online/newspaper advertisements announced a study on "sexual relationships," and stipulated that participants should be women between the ages of 18 and 25 who identified as African American or Black and who were currently in a sexual relationship with a "main partner." Flyers were placed on college campuses, as well as in public places, including health clinics, youth organizations, supermarkets, employment agencies, libraries, and grocery stores serving individuals from predominantly low-income, urban areas of the St. Louis region. In-person recruitment occurred at beauty shops, laundromats, on college campuses, and at community festivals and parades in the St. Louis African American community.

The final sample was made up of 132 participants (*M* age = 21.80; *SD* = 2.19). Of those, 75% of participants were recruited through the flyers and online/newspaper advertisements (completed an online computer survey), and 25% were recruited in-person (completed pen and paper surveys). While all participants identified as African American or Black, 13% also identified as biracial (primarily Caucasian and American Indian). Participants reported having 14 years of education on average (*SD* = 1.86), and approximately 70% of participants endorsed currently attending college or a post-secondary technical school. Roughly 63% of participants endorsed having a full- or part-time job. The average total annual household income for participants in this sample was approximately $35,000. The vast majority (89%) of participants lived with at least one other person in the home, and 42% of participants lived with more than three other

people. An estimated 54% of participants lived below the national poverty threshold; to determine this figure, participants' reported total household income was divided by the total number of people in the home and compared to the individual poverty threshold level of $11,139 (DeNavas-Walt et al., 2011).

While all participants reported being in a current relationship with a male partner, 86% of participants described their sexual orientation as heterosexual, 9% identified as bisexual, 3% were unidentified, and 1% identified as homosexual. Although all women were in a sexual relationship, 83% endorsed being in an exclusive or monogamous sexual relationship and 37% of participants reported currently cohabiting with their partners. Eighty-four percent of participants were unmarried, 40% had been pregnant at some point in their lives, and 30% reported having at least one child. Roughly half of all participants (48.5%) reported using some form of regular hormonal birth control. The average age of first intercourse was 16.23 years (*SD* = 2.13), and participants reported an average of nine lifetime sexual partners (*SD* = 12.60). Approximately 78% of participants had been previously tested for HIV and 34% had been diagnosed with an STI at some point in their lives. Sixty-three percent of participants reported not using a condom during their last intercourse. Finally, approximately 10% of participants had spent at least 24 hrs in prison (as had 19% of participants' main sexual partners); serving time in prison is a risk factor for HIV infection (Bureau of Justice Statistics, 2004).

Measures (see Appendix C)

Demographic and sexual history information. All participants completed a demographic questionnaire that included information on age, race, gender, relationship

status, household income level, sexual orientation, sexual history, and HIV/STI risk behaviors.

Relationship Power. Relationship power was measured using the Sexual Relationship Power Scale (SRPS). The SRPS was developed by Pulerwitz, Gortmaker, and DeJong (2000) to measure power in sexual relationships and investigate the role of relationship power in sexual decision-making and HIV risk. A strength of the SRPS is that it was designed and tested with groups of minority women, including Latina and African American women, in addition to White women. The SRPS possessed good internal consistency reliability ($\alpha = .84$) and demonstrated both predictive and construct validity with a sample of low-income African American and Latina women recruited from a community health center (Pulerwitz et al., 2000). The 23-item scale is comprised of two subscales that measure issues related to Relationship Control (e.g. "My partner tells me who I can spend time with") and Decision-Making Dominance (e.g. "My partner usually has more say about whether we have sex") within the relationship. High scores represent high sexual relationship power. The two subscales may be combined to achieve a total "relationship power" score (Pulerwitz et al., 2000). Most items use a four-point Likert scale, ranging from *strongly agree* to *strongly disagree*. The SRPS total score showed very good internal consistency in the current sample, with a Chronbach's alpha of .90.

Avoidance Motives for Sex. In order to measure avoidance motives for sex, the Sexual Motivation Scale (SMS) developed by Cooper et al. (1998) was used. The SMS consists of 29 items loading onto 6 subscales: 2 approach motives--Enhancement (using sex to gain pleasure, e.g. "How often do you have sex just for the thrill of it?") and

Intimacy (using sex to strengthen a relationship, e.g. "How often do you have sex to express love for your partner?")--as well as 4 avoidance motives--Coping (using sex to avoid negative emotions, e.g. "How often do you have sex to help you deal with disappointment in your life?"), Self-Affirmation (using sex avoid negative feelings about oneself, e.g. "How often do you have sex to reassure yourself that you are sexually desirable?"), Peer Approval (using sex to avoid rejection from a peer group, e.g. "How often do you have sex because people will think less of you if you don't?"), and Partner Approval (using sex to avoid partner disapproval or rejection from a partner, e.g. "How often do you have sex out of fear that your partner won't love you anymore if you don't?"). Items are rated on a 5-point Likert scale ranging from *almost never/never* to *almost always/always*; high scores represent greater endorsement of each motive. These subscales demonstrated invariance across gender, racial groups, and age, as well as good reliability and validity in both college and community samples (Cooper et al., 1998). For the current analyses, a total "Avoidance Motives" score was used, based on a total score of items from the four avoidance motive subscales. Internal consistency of the Avoidance Motives scale was excellent in the current sample with an alpha of .92.

Relationship Commitment. Relationship commitment was measured with the Investment Model Scale (IMS; Rusbult et al., 1998). The IMS is designed to measure the four constructs within the Investment Model: satisfaction, quality of alternatives, investment size, and commitment. Subscales for satisfaction, quality of alternatives, and investment size consist of five "facet" items, followed by five "global" items. Facet items are unscored and are intended to provide concrete examples of each construct to increase participants' comprehension of the global scored items, increasing their

reliability and validity (Rusbult et al., 1998). The commitment subscale consists of seven scored items, resulting in a total of 22 scored items for the scale in its entirety. Examples of items include: "My relationship is close to ideal" (satisfaction); "If I weren't dating my partner, I would do fine – I would find another appealing person to date" (quality of alternatives); "I have put a great deal into our relationship that I would lose if the relationship were to end" (investment); and "I want our relationship to last for a very long time" (commitment). Responses for global items range from 0 (*do not agree at all*) to 8 (*agree completely*). Higher scores indicate greater levels of satisfaction, quality of alternatives, investment, and commitment. A composite score on the IMS has been obtained by combining the four subscale scores (Meyer, Berkman, Karremans, & Lieberman, 2011); this approach was used in the current study to obtain a total "relationship commitment" score. The IMS has demonstrated good internal consistency using samples of male and female college students in ongoing dating relationships, with alphas ranging from .82 to .95. The IMS also possesses good convergent and discriminant validity, as evidenced by strong empirical relationships with other relationship and dyadic adjustment measures (Rusbult et al., 1998). In the current sample, the total IMS scale had an alpha of .91.

Condom Use Self-Efficacy. Condom use self-efficacy was measured using the Condom Use Self-Efficacy Scale (CUSES). The CUSES is a 28-item scale designed Brafford and Beck (1991) to assess an individual's perception of his or her ability to use condoms. Items are rated on a 5-point Likert scale, ranging from *strongly agree* to *strongly disagree*; higher scores indicate stronger perceptions of condom use self-efficacy. In addition to a total condom use self-efficacy score, the scale has four

subscales, established by Brien et al. (1994): Mechanics (confidence to carry out the mechanics of using a condom in a sexual encounter), Partner Disapproval (confidence to deal with rejection from a sexual partner because of his or her negative reaction to the request to use a condom); Assertive (ability to persuade a partner to use a condom), and Intoxicants (ability to use condoms while under the influence of alcohol, other drugs, or passion). The total CUSES scale demonstrated very good internal consistency reliability (α = .91) and test-retest reliability (two week correlation = .81) with a sample of largely heterosexual college students; it has also been found to correlate well with other measures of condom use efficacy (Brafford & Beck, 1991). Sample statements include: "I feel confident in my ability to use a condom correctly" and "I feel confident in my ability to suggest using condoms with a new partner." This measure has also been used successfully with African American girls (Salazar et al., 2005). In the current sample, internal consistency for the total CUSES was excellent (α = .93).

Condom use. For hypotheses 1-3, three condom use outcome variables were used: The first, unwanted unprotected sex, was measured using the following item, “IN THE PAST 6 MONTHS, in your current relationship with your MAIN partner, approximately how many times have you had sex without a condom when you wanted to use a condom (at least to some degree) and your partner did not want to use one? (If you have been in a relationship with your MAIN PARTNER for less than 6 months, approximately how many times has this occurred in the course of your relationship?)” The second condom use variable was condom use proportion, defined as the proportion of times in the past six months when condoms were used during sexual intercourse with a main sexual partner. Participants were asked: “IN THE PAST 6 MONTHS,

approximately how many times have you and your MAIN partner had vaginal sexual intercourse? (If you have been in a relationship with your partner for less than 6 months, approximately how many times have you and your partner had sex in the course of your relationship?)" and then: "Of the number you gave in the previous question, approximately how many of those times did you and your MAIN partner use a condom?" The number of instances of sex using condoms was divided by the total number of instances of sexual intercourse to arrive at a value for condom use proportion. Finally, the third outcome variable, condom use percentage, was derived by asking participants, "What percentage of the time do you and your MAIN partner use condoms when having vaginal sex? Please enter a number from 0-100%. 0% indicates that you have never used a condom during vaginal sex with your partner and 100% indicates that you have used a condom every time you have had vaginal sex."

Ambivalence about condom use. To address hypothesis 4, ambivalence about condom use was measured using the following two items: (1) "Think about the LAST TIME you engaged in sex WITH a condom. To what extent did you want to use a condom in this situation?"; and (2) Think about the LAST TIME you engaged in sex WITHOUT a condom. To what extent did you want to use a condom in this situation?" For both questions, participants rated their degree of wantedness on a 7-point likert scale ranging from -3 (I STRONGLY preferred NOT TO use a condom) to 3 (I STRONGLY preferred TO use a condom). Participants also answered open-ended questions about reasons for wanting and not wanting to use a condom during their last experience of sexual intercourse with a condom and their last experience of intercourse without a condom.

Procedures

For online participants, recruited through flyers and online/newspaper advertisements, participants were directed to an online link to determine their eligibility for the study. Respondents completed a brief online questionnaire to ensure that they met the eligibility criteria for study participation. The screening questionnaire is included in Appendix A. Respondents were asked to provide their email addresses or telephone numbers to be contacted if they were eligible to complete the study. The principal investigator then contacted eligible individuals within 48 hours via email or phone. Eligible participants were given a link to the online survey, which was posted on www.surveymonkey.com. Women recruited through flyers and online/newspaper advertisements received an online debriefing sheet at the conclusion of the study (see Appendix B), and were also asked to leave their mailing addresses, in order to have a $15 gift card mailed to them as compensation for their participation in the study. In total, 332 individuals completed the online screening questionnaire. Out of this group, 176 women were deemed eligible based on the eligibility criteria and were invited to participate in the study. Of those, 123 completed the survey (a 70% completion rate).

In order to enhance recruitment, and because it was hypothesized that not all potential participants would have easy internet access, participants were also recruited in-person. The principal investigator and research assistants visited beauty salons, laundromats, festivals, parades, and other events on college campuses and in the broader community, in order to solicit individuals to participate in the study. When possible, the principal investigator and research assistants set up a table with signs advertising the study and informing women that they could take the survey immediately, through a paper

and pencil copy of the questionnaire, in order to earn a $15 gift card to a retail store. When it was not possible to reserve a table, the principal investigator and research assistants approached women who appeared to be between the ages of 18 to 25 and of African American ethnicity, presented them with a flyer, and asked if they would be interested in participating in the study. In both cases, if women were interested in participating, the investigator and research assistants orally administered two brief screening questions: 1) What is your age?; and 2) Do you have a "steady" or main sexual partner; that, is a partner in a sexual relationship that you consider your primary or only relationship? If women were deemed eligible on the basis of these two questions, they were permitted to complete the paper and pencil questionnaire (which was identical to the online questionnaire in terms of content and formatting). Women recruited in-person were not required to complete a screening questionnaire and were not asked to leave their email addresses, mailing addresses, or any other identifying information. After they completed the survey by hand, women recruited in-person were given a paper copy of the debriefing form (see Appendix B) and a $15 gift card to a retail store.

For all participants, upon reading an informational page describing the nature of the study and assuring their voluntary participation, participants provided their informed consent, followed by completion of the demographic questionnaire and measures. Completion of the self-report measures took approximately 20-30 minutes. Participation was confidential, with identifying information collected only from individuals who completed the survey online for the purposes of mailing reimbursement for participation ($15 gift card to a retail store). All data was de-identified after data collection was completed.

Results

Data Preparation

Data analyses were conducted in SPSS. A total of 169 participants completed the survey (123 online surveys, 46 paper surveys). However, 37 cases were excluded from analysis for the following reasons: (1) Failing to give consent, (2) Not meeting demographic eligibility criteria for the study (i.e., female, between the ages of 18-25, self-identified as African American or Black), or (3) Not currently in a heterosexual sexual relationship with a "steady" or main partner. This left 132 participants in the final sample. An *a priori* power analysis was performed using Cohen's (1988) guidelines. To achieve power = .95, with alpha set at $p < .05$, power analyses for the linear regression with two predictor variables and an interaction term, expecting a moderate effect size of $f^2 = .15$, suggested that a minimum of 120 participants was required. Participant recruitment exceeded that goal.

Several variables had to be calculated before statistical analyses could take place. In order to calculate the first sexual risk outcome variable, termed "Unwanted Unprotected Sex," responses were obtained from the item, "IN THE PAST 6 MONTHS, in your current relationship with your MAIN partner, approximately how many times have you had sex WITHOUT a condom when you wanted to use a condom (at least to some degree) and your partner did not want to use one? (If you have been in a relationship with your partner for less than 6 months, approximately how many times has this occurred in the course of your relationship?)." As this variable was significantly positively skewed and leptokurtic ($M = 5.67$, $SD = 21.44$, *skewness* = 6.05, *kurtosis* = 41.64), the variable was dichotomized (0 = no instances of unwanted unprotected sex, 1 =

at least one instance of unwanted unprotected sex). For the second sexual risk outcome variable, "Condom Use Proportion," the total reported instances of vaginal sex with a participant's primary partner in which a condom was used in the past six months was divided by the total instances of vaginal sex in the past six months with that same partner, to arrive at a value for condom use proportion. Only participants who acknowledged at least one instance of vaginal sexual intercourse with their main partners in the past six months were included in these analyses (N =127). This variable proved to be significantly skewed and platykurtic, with a bimodal distribution (M = .39, SD = .42, *skewness* = .44, *kurtosis* = -1.58). For this reason, the variable was also dichotomized (0 = at least one instance of unprotected sex; 1 = no instances of unprotected sex). After finding that the condom use proportion variable was highly skewed, the related continuous variable of condom use percentage was also used in the analyses, which seemed to function better statistically. For the "Condom Use Percentage" variable, responses were used to the item, "What percentage of the time do you and your MAIN partner use condoms when having vaginal sex? Please enter a number from 0-100%." This variable was more evenly distributed than the other two outcome variables, although still platykurtic (M = 43.85, SD = 43.41, *skewness* = .28, *kurtosis* = -1.76). The condom use percentage variable was left as a continuous variable in the analyses.

Next, in order to calculate the variable "Relationship Power," first, the mean imputation method was used to calculate scores for any missing data. Any participant with more than 25% of items missing on a given scale was excluded from analysis. However, if a participant had at least 75% of the items on a scale, missing values were replaced with the mean score for the scale's completed items. Scores for the two

subscales on the Sexual Relationship Power Scale (SRPS)--Relationship Control and Decision-Making Dominance--were calculated separately using the mean imputation approach, and then the two subscales were averaged to establish a total Relationship Power score. To create the variable, "Avoidance Motives," the mean imputation approach was used to calculate the six subscales from the Sexual Motivation Scale (SMS). The four avoidance motives subscales--Self-Affirmation, Coping, Peer Approval, and Partner Approval--were then averaged to create a total Avoidance Motives score. In order to calculate the variable "Relationship Commitment," scores were calculated separately for each of each of the four Investment Model Scale (IMS) subscales--Satisfaction, Quality of Alternatives, Investment, and Commitment--using the previously described mean imputation method. The four subscales were then averaged to create a total Relationship Commitment score.

Finally, to create the variable "Condom Use Self-Efficacy," items requiring reverse-scoring for negatively worded items were scored accordingly. Then all responses were reverse-scored so that higher scores would equal greater condom use self-efficacy. A total Condom Use Self-Efficacy score was created by using the mean imputation approach for missing scores and then multiplying by the number of items on the scale to end up with a sum total score for Condom Use Self-Efficacy.

Preliminary Analyses

To assess whether there were significant differences on the key variables in the analyses between participants who completed the survey online and those who completed the survey on paper, independent samples t-tests (for the continuous variables) and chi-square tests (for dichotomous variables) were performed on the data. Results can be found in Tables

1 and 2. As seen in Table 1, a significant finding was obtained with respect to group differences on avoidance motives, t (122) = -2.26, p <0.05, suggesting that "In-Person" participants reported a higher level of avoidance motives than did "Online" participants. Further, as seen in Table 2, a significant group difference was found with respect to condom use proportion, χ^2 (1, N = 126) = 6.79, p < .01, such that In-Person participants were more likely to have engaged in unprotected sex according to the condom use proportion outcome variable than Online participants. As a result of these sub-sample differences, all analyses involving the avoidance motives and condom use proportion variables were run once with the entire sample and then a second time with only the sub-sample of Online participants included. The pattern of results did not differ when the In-person participants were included and when they were excluded from the analyses. In addition, there were no significant differences found between the two groups on the other key variables in the study, including relationship power, relationship commitment, condom use self-efficacy, unwanted unprotected sex, or condom use percentage, or on basic demographic and risk variables, including household income, likelihood of having ever had an STI, use of condoms during most recent intercourse, or number of total lifetime sexual partners. As a result, the two sub-samples were combined into one sample for all subsequent analyses. Bivariate correlations between all main variables in the analyses, along with income level (defined as total household income divided by number of individuals in the household), were also investigated and can be found in Table 3.

Table 1

T-Test Comparisons between Online Participants (n=99) and In-Person Participants (n= 33) on Key Variables in Moderation Analyses

	M	*SD*	*t*	Sig.
Condom Use Percentage				
Total Sample	*43.85*	*43.41*		
Online Participants	45.96	43.09	.88	.38
In-Person Participants	38.18	44.44		
Condom Use Self-Efficacy				
Total Sample	*92.89*	*18.16*		
Online Participants	93.11	17.95	.22	.82
In-Person Participants	92.27	19.03		
Relationship Power				
Total Sample	*2.75*	*.35*		
Online Participants	2.74	.38	-.74	.46
In-Person Participants	2.79	.27		
Relationship Commitment				
Total Sample	*6.14*	*1.66*		
Online Participants	6.06	1.68	-.90	.37
In-Person Participants	6.36	1.60		
Avoidance Motives				
Total Sample	*1.52*	*.65*		
Online Participants	1.44	.56	-2.26*	.03
In-Person Participants	1.73	.83		

**$p < .01$, *$p < .05$

Table 2

Chi-square Test Comparisons between Online Participants (n=99) and In-Person Participants (n= 33) on Key Variables in Moderation Analyses

	Total Sample	Online	In-Person	$\chi 2$	*p*	Φ
	% of total	% of online	% of in-person			
Unwanted Unprotected Sex						
None in last 6 months	71	70	72	.03	.90	-.02
One or more in last 6 months	29	30	28			
Condom Use Proportion						
Condom used less than 100% of time	40	33	60	6.79**	.009	-.23
Condom used 100% of time	60	67	40			

**$p < .01$, *$p < .05$

Table 3

Bivariate Correlations between Variables

	Condom Use Proportion	Unwanted Un-protected Sex	Condom Use Percentage	Relation-ship Power	Relation-ship Commit ment	Avoidance Motives for Sex	Condom Use Self-Efficacy	Income
Condom Use Proportion[a]	1							
Unwanted Unprotected Sex[b]	.03	1						
Condom Use Percentage	.53**	.00	1					
Relationship Power	-.01	-.13	-.02	1				
Relationship Commitment	-.18*	.12	-.27**	.18*	1			
Avoidance Motives for Sex	-.21*	.13	.00	-.16	.10	1		
Condom Use Self-Efficacy	.21*	-.14	.18	.34**	.06	-.29**	1	
Income[c]	.16	-.14	-.02	.07	.04	-.10	.09	1

** $p < .01$, * $p < .05$

[a]For condom use proportion, the dichotomized variable was used: 0 = low condom use (at least one instance of unprotected sex), 1 = high condom use (no instances of unprotected sex).

[b]For unwanted unprotected sex, the dichotomized variable was used: 0 = low risk (no instances of unwanted unprotected sex), 1 = high risk (at least one instance of unwanted unprotected sex).

[c]For income, the total household income was divided by number of individuals in the household.

Tests of the Hypotheses

First, hypotheses 1 through 3 were tested via hierarchical logistic and linear regression analyses in SPSS. All independent variables to be included in the analyses were centered before creating interaction terms, in order to reduce multicollinearity. To test each of the three main hypotheses, three separate hierarchical regression analyses (two logistic regressions and one linear regression) were conducted for each hypothesis, each using a different sexual risk outcome variable. Condom use self-efficacy and the relationship variable were entered in step 1 and the interaction term was entered in step 2.

Hypothesis 1. To test hypothesis 1, that relationship power would moderate the relationship between condom use self-efficacy and sexual risk, logistic regression analyses were performed first to assess whether relationship power would moderate the relationship between condom use self-efficacy and each of the two dichotomous sexual risk outcome variables. First, in a logistic regression using unwanted unprotected sex as the outcome variable, the first step of the model with condom use self-efficacy and relationship power entered as predictors was not significant, χ^2 (2, N = 118) = 2.77, p = .25. The second step of the model that included the interaction term was significant, however, χ^2 (3, N = 118) = 9.07, p = .028, as was the interaction between relationship power and condom use self-efficacy, B = .09, SE_B = .04, p = .033, OR = 1.09. These results suggest that relationship power significantly interacted with condom use self-efficacy to predict sexual risk, specifically unwanted unprotected sex; however, the

pattern of this interaction was very different from that which was hypothesized (see Figure 4). When women were high in both relationship power and condom use self-efficacy, or were low in both of these factors, their likelihood of unwanted unprotected sex appeared to increase. For women who were low in either relationship power or condom use self-efficacy and high in the other, likelihood of unwanted unprotected sex appeared to decrease. Neither relationship power nor condom use self-efficacy was a significant independent predictor of unwanted unprotected sex in the full model containing the interaction.

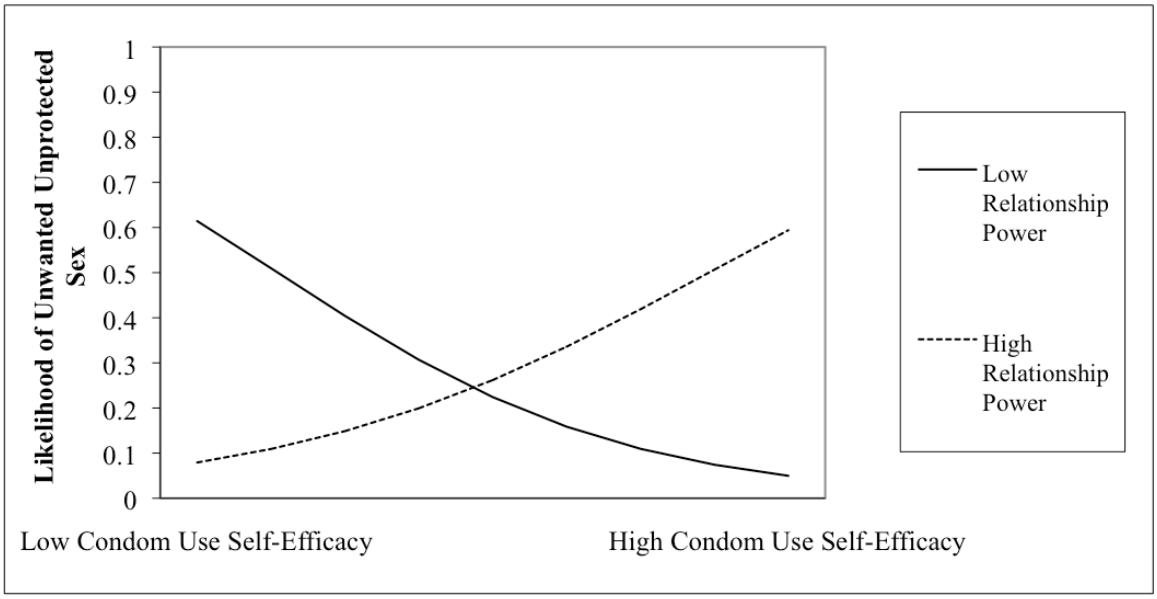

Figure 4. Model of the relationship between condom use self-efficacy and sexual risk (i.e., unwanted unprotected sex), moderated by relationship power.

Using condom use proportion as the outcome variable in a hierarchical logistic regression analysis, the first step with condom use self-efficacy and relationship power entered was significant, χ^2 (2, N = 117) = 6.92, p = .031, with condom use self-efficacy

serving as a significant predictor of condom use proportion, $B = .03$, $SE_B = .01$, $p = .012$, OR = 1.03. However, in the second step, the full model containing the interaction term was non-significant, χ^2 (3, $N = 117$) = 6.96, $p = .07$.

Finally, a hierarchical linear regression was run with relationship power and condom use self-efficacy entered in the first step and the interaction term in the second step using condom use percentage as the continuous outcome variable. The first step, with condom use self-efficacy and relationship power entered as predictors was not significant, $R^2 = .04$, $F(2, 115) = 2.22$ $p = .11$, nor was the overall model in the second step containing the interaction term, $R^2 = .04$, $F(3, 115) = 1.54$, $p = .21$.

Hypothesis 2. In order to assess hypothesis 2, that avoidance motives for sex would moderate the relationship between condom use self-efficacy and sexual risk, logistic regression analyses were performed with each of the two dichotomous outcome variables. In a logistic regression with unwanted unprotected sex as the outcome variable, the first step, which had condom use self-efficacy and avoidance motives for sex entered as predictors, was not significant, χ^2 (2, $N = 119$) = 2.39, $p = .30$. The second step, containing the interaction term, was also non-significant, χ^2 (3, $N = 119$) = 2.59, $p = .46$.

Using condom use proportion as the outcome variable, the overall model of the logistic regression in the first step was significant, χ^2 (2, $N = 118$) = 6.90, $p = .032$, however neither of the predictors independently significantly predicted condom use proportion. The second step containing the interaction term was not significant, χ^2 (3, $N = 118$) = 7.00, $p = .07$.

In a linear regression with condom use percentage as the continuous outcome

variable, the first step with condom use self-efficacy and avoidance motives for sex entered as predictors was not significant, $R^2 = .03$, $F(2, 116) = 1.91$, $p = .15$; nor was the second step containing the interaction term, $R^2 = .04$, $F(3, 116) = 1.57$, $p = .20$.

Hypothesis 3. Next, to assess hypothesis 3, that relationship commitment would moderate the relationship between condom use self-efficacy and sexual risk, logistic regression analyses were run testing relationship commitment as a moderator of the relationship between condom use self-efficacy and each of the two dichotomous outcome variables. With unwanted unprotected sex as the outcome variable, in the first step the full model containing condom use self-efficacy and relationship commitment as predictors was not significant, χ^2 (2, $N = 119$) = 3.73, $p = .16$. The second step containing the interaction term was also non-significant, χ^2 (3, $N = 119$) = 5.48, $p = .14$.

With condom use proportion as the outcome variable, the first step, with condom use self-efficacy and relationship commitment entered, was significant, χ^2 (2, $N = 118$) = 9.29, $p = .01$; condom use self-efficacy, $B = .03$, $SE_B = .01$, $p = .019$, OR =1.03 and relationship commitment, $B = -.25$, $SE_B = .12$, $p = .047$, OR =.78 each significantly predicted condom use proportion. In the second step, the full model containing the interaction term was also significant, χ^2 (3, $N = 118$) = 10.25, $p = .017$; however, condom use self-efficacy was the only independent significant predictor of condom use proportion in this model, $B = .03$, $SE_B = .01$, $p = .017$, OR =1.03, with higher self-efficacy being associated with higher likelihood of condom use.

Finally, a linear regression was conducted with condom use percentage as the outcome variable. The first step, with condom use self-efficacy and relationship commitment entered as predictors, was significant, $R^2 = .12$, $F(2, 116) = 8.06$, $p = .001$.

Condom use self-efficacy, B = -.21, $t(116) = 2.33$, p = .022, and relationship commitment, B = -.31, $t(116) = -3.46$, p = .001, were each significant predictors of condom use percentage in step 1. Step 2 with the interaction term contained in the model, was also significant, R^2 = .12, $F(3, 116) = 5.33$, p = .002. While the interaction term itself was not a significant independent predictor of condom use, indicating that relationship commitment did not moderate the relationship between condom use self-efficacy and condom use percentage, relationship commitment was a significant independent predictor of condom use percentage in step 2, B = -.31, $t(116) = -3.40$, p = .001, with higher relationship commitment being associated with lower rates of consistent condom use. Condom use self-efficacy also independently predicted condom use percentage in this model, B = .21, $t(116) = 2.32$, p = .022, with higher self-efficacy associated with more consistent condom use. Of note, relationship commitment was a stronger independent predictor of condom use percentage than was condom use self-efficacy.

Hypothesis 4. In order to test the fourth hypothesis, that women would endorse ambivalence about using condoms, responses were examined to the questions: 1) "Think about the LAST TIME you engaged in sex WITH a condom. To what degree did you want to use a condom in this situation?" and 2) "Think about THE LAST TIME you engaged in sex WITHOUT a condom. To what degree did you want to use a condom in this situation?" For each question, participants rated their degree of wantedness on a 7-point likert scale ranging from -3 (*I strongly preferred NOT TO use a condom*) to 3 (*I strongly preferred TO use a condom*). Results indicated that, for both questions, participants utilized the entire seven point scale, meaning that women endorsed

wantedness at each step along the continuum, both when they actually used condoms and when they did not. The distribution of responses to both questions can be found in Figure 5. Of note, while almost 60% of women reported strongly wanting to use condoms during their most recent sexual intercourse with a condom, approximately 10% of women endorsed strongly NOT wanting to use condoms on this occasion. It appears that, even when condoms are used, women may have ambivalent or even negative feelings about their use.

In addition, as seen in Figure 5, nearly 30% of women reported not caring whether or not a condom was used during their most recent episode of unprotected sex; apathy or passivity about condom use may lead young women to engage in sexually risky behaviors. Overall, these findings support the hypothesis that many women display ambivalence or uncertainty about condom use, and that wantedness of condom use occurs along a spectrum. Further, it appears that women's behavioral use of condoms may not always coincide with their actual wantedness of condom use in any given situation.

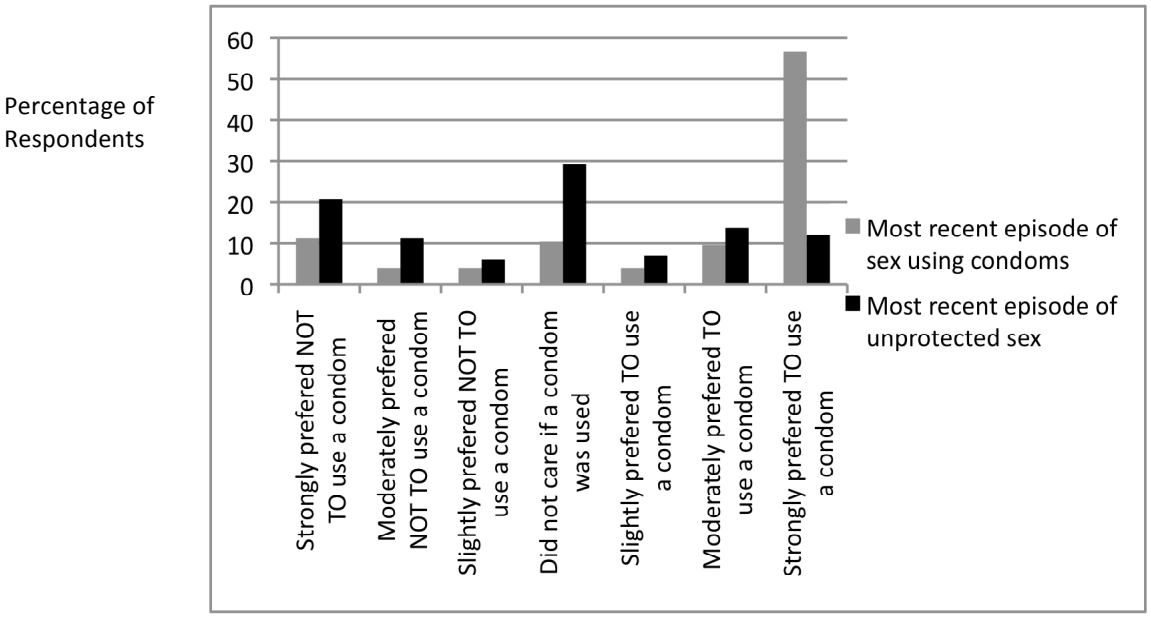

Figure 5. Distribution of results on wantedness of condom use during most recent episode of sex using condoms and most recent episode of unprotected sex.

As additional support for the hypothesis about women's ambivalence toward condom use, participants were identified who had scores of 0 on the unwanted unprotected sex variable (meaning they had no instances of sex without a condom when condom use was desired with their main partner in the past six months), as well as scores of less than 1 on the condom use proportion variable in its continuous form (meaning they had at least one instance of unprotected sex with their main partner in the past six months). Out of 85 women who endorsed 0 on unwanted unprotected sex, 72% also had a condom use proportion of less than 1. This suggests that a majority of women in the current sample actually *did not want* to use condoms with their main partners during at least one occasion when they had unprotected sex during the past six months. This finding makes clear that women have their own reasons for engaging in unprotected sex,

which may or may not be connected with a desire to please or pacify a male partner.

To further examine the fourth hypothesis, that women will express ambivalence about condom use, a systematic analysis of women's open-ended responses about reasons for wanting and not wanting to use condoms was proposed. However, the majority of participants gave very brief descriptions of their experiences in response to open-ended questions. Participants may have been confused by the fact that the survey was asking for reasons for both wanting and not wanting to use condoms in the same situation, which is in itself a complicated idea. Many women appeared to respond with general reasons for wanting and not wanting to use condoms in their relationships, but their reasons were not obviously tied to any one instance of sexual behavior. The qualitative data as a whole were not particularly useful in developing an understanding of women's sexual risk-taking behaviors, and thus were not formally analyzed as part of this study. However, a small number of participants were able to describe their ambivalence about condom use and sexual risk-taking more broadly. Their responses serve to illuminate the present study's other findings, and are discussed below.

Discussion

The present study investigated several ways that condom use self-efficacy might interact with relational factors, including relationship power, avoidance motives for sex, and relationship commitment, in order to predict sexual risk-taking, specifically unprotected sex, among young urban African American women. The current study helps to extend the growing body of literature taking into account relationship and social factors in sexual risk-taking (DiClemente, Salazar, & Crosby, 2007; Hallfors et al., 2007; Lightfoot, 2012; Lightfoot & Milburn, 2009); however, as the results obtained were not

supportive of proposed hypotheses, additional research appears needed to further investigate the complicated relationships among the variables in the present study.

A second aim of the present study was to explore a relatively understudied topic--the extent to which young women experience ambivalence about using condoms and how this ambivalence may affect their decisions around condom use in the context of relationships. In the literature on sexual risk, women are often assumed to want to use condoms unequivocally in all situations. The current findings suggest, in contrast, that young women have complex and ambivalent feelings about condom use, which are likely shaped by the social and relational contexts in which their condom use decisions occur.

The first hypothesis, that relationship power would moderate the relationship between condom use self-efficacy and condom use, was not supported. Relationship power did interact with condom use self-efficacy to predict unwanted unprotected sex; however, the nature of this relationship was very different from that hypothesized. It was originally hypothesized that relationship power would moderate the relationship between condom use self-efficacy and condom use such that, for women who were low in relationship power the likelihood of unwanted unprotected sex would be high regardless of the level of condom use self-efficacy, and for women high in relationship power, lower condom use self-efficacy would be associated with higher risk (see Figure 1). In the present study, however, for women with low levels of relationship power, lower condom use self-efficacy was associated with greater likelihood of unwanted unprotected sex than higher self-efficacy. Further, for individuals high in relationship power, higher condom use self-efficacy was related to a greater likelihood of unwanted unprotected sex than lower condom use self-efficacy (see Figure 4).

This last finding may be the most puzzling aspect of the pattern of results obtained in the present study: the group of women with high relationship power scores, who were also high in condom use self-efficacy, had an increased likelihood of engaging in unwanted unprotected sex. There are several potential reasons for this surprising finding. First, it may be that the women in this high power, high self-efficacy group are more empowered in their relationships and their lives more generally. They may see the value of safe sex because of their feelings of empowerment and self-worth and *want* to consistently use condoms when having sex. The fact that they want to use condoms consistently would then provide more overall opportunity for these women to experience and endorse a greater number of occasions of unwanted unprotected sex. A second possibility is that women who are higher in relationship power and condom use self-efficacy may have more positive feelings about their partners in their perceived egalitarian relationships. They may have a greater desire to please their partners by consenting to unwanted unprotected sex, based on their positive feelings toward these relationships. The current study also found that women who were high in relationship power but low in condom use self-efficacy reported low likelihood of engaging in unwanted unprotected sex. It may be that women who feel empowered in their relationships but lack confidence specifically in the area of condom use may actually *not want* to use condoms at the same rates as other women, which could result in fewer overall occasions of unwanted unprotected sex.

In addition, although it was expected that women with low relationship power would engage in high levels of sexual risk regardless of their level of condom use self-efficacy, this proved not to be the case in the current sample. For women with low

relationship power but high condom use self-efficacy, likelihood of engaging in unwanted unprotected sex was reduced, while women with low power and low condom use-efficacy endorsed greater likelihood of engaging in unwanted unprotected sex. These findings do suggest, on a positive note, that women who lack power more broadly in their relationships may still be effective at negotiating for condom use if they have a positive sense of self-efficacy related to this particular set of skills. Further research is clearly needed to explain the very complex associations between the variables of relationship power and condom use self-efficacy and the concept of consenting to unwanted unprotected sex.

In analyzing these results, it is important to note that relationship power moderated the relationship between condom use self-efficacy and sexual risk with only one out of the three proposed sexual risk variables--unwanted unprotected sex. The construct of unwanted unprotected sex is a complicated one, which has been relatively understudied in recent literature. Whereas the two other sexual risk variables in the current study simply assessed the frequency of a behavior--the proportion of sexual encounters using condoms with a woman's main partner out of total sexual encounters with that partner in the past six months, or the overall percentage of sexual encounters using condoms with a woman's main partner in the past six months--the variable of unwanted unprotected sex measured not only a behavior, but also a woman's awareness of and recollection of her mental state and of her partner's mental state during a specific sexual encounter. Women were asked to think about times they had unprotected sex when they "wanted to use a condom (at least to some degree)" and their "partner did not want to use one." It may be that it is a more challenging task for women to recall not

only their sexual behaviors, but also their cognitions and their perception of their partner's cognitions during a specific past occasion, in order to determine if there were times when they engaged in unwanted unprotected sex.

The unwanted unprotected sex outcome variable is further complicated in that low scores on this item could indicate a number of different underlying causes. Out of 118 women included in these analyses, 85 (or 72%) endorsed never having engaged in unwanted unprotected sex with their main partners in the past six months. From their responses, it is not clear if women in this group had simply not been in a situation in the past six months in which they had had unprotected sex with their main partners, if they had not been in a situation in which they had actually *wanted* to use condoms, or had not been in a situation in which their partners had *not wanted* to use condoms. Thus it is impossible to say with certainty that low scores on the unwanted unprotected sex variable represent behavior that is truly low in sexual risk.

It is also important to note that participants were asked to think about instances when they "wanted" to use a condom; this question presents wantedness in a dichotomous way. As discussed below, other results from the current study suggest that women may often feel ambivalent about wanting to use a condom. Because of potentially conflicting reasons for wanting and not wanting to use condoms, it may have been difficult for participants to judge whether they wanted to use a condom in a specific situation or not. Still, despite the complexity of this variable, unwanted unprotected sex remains an important concept worthy of measurement and future investigation. The fact that the unwanted unprotected sex variable in this study was not closely correlated with the other two, more typically used, variables associated with unprotected sex speaks to

the fact that unwanted unprotected sex truly represents a separate outcome from unprotected sex more generally. Given that both behaviors have the potential to result in risky outcomes, it remains important to better understand the factors associated with each of these sexual risk behaviors.

The present study's second and third hypotheses, which suggested that avoidance motives for sex and relationship commitment would independently moderate the relationship between condom use self-efficacy and condom use, were not supported by results. However, while not part of the original hypotheses, it was found that relationship commitment predicted the sexual risk variable of condom use percentage in a linear regression model over and above amount of the variance accounted for by condom use self-efficacy, which is in itself an important finding. For the young African American women in the current sample, relationship commitment appears to be a stronger predictor of condom use than condom use self-efficacy. This finding is in line with prior research with a sample of low-income predominantly African American and Latina women, which found that relationship commitment more strongly predicted sexual risk-taking than several other key factors, including self-efficacy for condom use, perceived susceptibility to HIV/AIDS, and communication around condom use (Tucker et al., 2007). The current findings also correspond with those of a qualitative study examining HIV/AIDS risk factors among impoverished, mainly minority women, which found that higher relationship commitment predicted greater frequency of unprotected sex, regardless of whether women deemed their relationships "casual" or "primary" (Ryan et al., 2009).

The individual-level factor of condom use self-efficacy appears less important than commitment to and investment in a relationship for predicting young African

American women's willingness to have unprotected sex. This is likely to be particularly true for young urban African American women, who may overlook their risk for HIV and STIs because of societal pressures brought on by living in poverty and a lack of perceived alternatives as a result of the gender imbalance in this community (Breny Bontempi et al., 2008). If women's focus is on maintaining relationships rather than on self-protection, they may prioritize avoiding conflict and pleasing a partner over asserting a desire for condom use (Saul et al., 2000). Further, the context of being in a committed relationship may cause women to prematurely trust a partner before that level of trust is actually warranted, and despite real risk factors. Results from the present study imply that it is important to assess young at-risk women's level of commitment to a relationship in order to better understand their risk for engaging in unprotected sex and to inform effective interventions with this vulnerable population.

A second major aim of the current study was to assess women's ambivalence about condom use, which was hypothesized to further help to explain in what circumstances women engage in unprotected sex in the context of their relationships. The current study's findings are supportive of the hypothesis that women do not always want to use condoms, and even when they do want to use condoms, they may have ambivalent feelings about doing so. First, it was found that 72% of the women who endorsed not having had any occasions of unwanted unprotected sex with their main partners in the past six months also endorsed at least one instance of unprotected sex with their partners during the same time period. This finding clearly suggests that women do not always want to use condoms in their relationships, which runs counter to the prevailing theory on sexual risk-taking in women.

Further, women in the present sample endorsed varying levels of wantedness of condom use along a continuum, during both their most recent protected and unprotected sexual encounters. Participants were offered a seven point likert scale to rate their wantedness of condom use; instead of utilizing only the most extreme end points of the scale ("I STRONGLY preferred NOT TO use a condom" or "I STRONGLY preferred TO use a condom") women endorsed condom use wantedness along the full scale. This finding indicates that women's wantedness of condom use is a not a binary construct (either they want to use a condom or they do not want to use a condom). Women may simultaneously hold reasons for wanting to use condoms and reasons for not wanting to use condoms, which together determine their overall level of wantedness of condom use in a given situation.

The qualitative data collected on women's reasons for wanting and not wanting to use condoms may serve to further illustrate these points. When asked about the last time they had sex using a condom and the last time they had unprotected sex, women were able to identify a variety of reasons for both wanting and not wanting to use condoms. The most commonly cited reasons for wanting to use condoms in both scenarios included pregnancy prevention and STI prevention. Several women also reported wanting to use a condom out of concern that a partner was unfaithful; for example, one woman wrote, "I saw a picture in his phone of a female," and another indicated that she "didn't trust [him] that well." Still another participant reported that she knew that her partner "has other sexual partners." Illustrating the complexity of "wantedness" of condom use, when asked about her reasons for wanting to use a condom, one woman indicated that she "only got the condom because he asked for one." Her desire to use a condom in that situation

appears entirely based on her partner's desire to use one, rather on than any intrinsic reason.

Women were also able to identify a variety of reasons for *not* wanting to use condoms. Themes that emerged most often included enjoying the feeling or sensation of sex without condoms, using other forms of birth control, being in an exclusive relationship in which both partners had been tested for STIs, seeking greater intimacy, avoiding irritation or discomfort related to condom use, and feeling caught up in the moment. Women often described wanting to feel closer to a partner through unprotected sex. For instance, one woman stated, "I care about him and trust him," and another reported, "it feels more loving and caring if we don't use one." Women also endorsed not wanting to interrupt the mood. One woman stated that she did not want to use condoms so she would not "have to worry about him - he loses his erection when putting on a condom so sex can be stressful." Another participant noted that negotiating condom use would require an "annoying awkward pause," and still another stated that "there was strong sexual tension between us and I didn't want to ruin it with a condom."

The qualitative data collected in the current study demonstrate that young women truly have a wide range of reasons for using and not using condoms when having sex. The reasons that participants gave for wanting and not wanting to use condoms are consistent with those found in the qualitative literature on women's condom use decision-making. For instance, in a qualitative study on young urban women's reasons for engaging in unprotected sex with partners known to be at high risk for HIV, Jones and Oliver (2007) found that women endorsed themes including having unprotected sex to satisfy or keep a partner, because it feels good, or because both partners have already

been tested for STIs. In another qualitative study, by Ryan et al. (2009), impoverished African American and Latina women endorsed not wanting to use condoms because they feel "trust and safety," as well as a desire for intimacy and emotional connectedness in the relationship. Further, Ryan et al. found instances where women endorsed not wanting to use a condom out of fear that a partner would interpret their request for a condom as meaning they were not committed to the relationship (Ryan et al., 2009).

The qualitative results also challenge the stereotype that women want to use condoms at all times, but simply have difficulty convincing men to do so. Such an assumption fails to take into account the gender-based power dynamics involved in heterosexual sexual relationships and the interpersonal nature of negotiation around condom use, in which women may have reasons for wanting or not wanting to use condoms, as well as reasons for wanting or not wanting to negotiate for their use with a male partner (Soet et al., 1998). The assumption that women always want to use condoms is further problematic in that it places undue burden on women to be the gatekeepers of sexual activity and guardians of safety, and takes responsibility off of men to engage in responsible safer sex behaviors to protect themselves and their partners. In reality, both women and men may respond to a variety of different tactics that partners can use to negotiate for condom use (Otto-Salaj et al., 2008).

In addition, previous research has demonstrated that both men and women may be ambivalent about having sex (O'Sullivan & Gaines, 1998), and that consenting to sex is conceptually different from wanting sex (Peterson and Muehlenhard, 2007). The present study extends this research specifically by addressing the complexity involved in wantedness of condom use itself. Women may consent to having unprotected sex and

still hold reasons for wanting to use condoms. Conversely, women may consent to sex using a condom but still hold reasons for not wanting to use condoms. To the extent that young women are ambivalent about condom use, they may be less likely to broach the subject of condom use with a partner, which may contribute to their increased HIV/STI risk. Overall, the qualitative data collected add support to the hypothesis that many women display ambivalence or uncertainty about condom use, which likely factors into their safer sex decision-making. In order to work with high-risk young women, acknowledging their ambivalent feelings about condom use is likely a good starting point in facilitating their commitment to safer sex practices.

Limitations and Directions for Future Research

There are several important limitations to the present study. One potentially problematic issue involves the conceptual complexity of some of the questions asked. While it may be a strength of the current study that it assesses unwanted unprotected sex and ambivalence about condom use, which are complex concepts, the very complexity of these subjects required that questions be asked in a way that may have been confusing to participants or required significant mental effort on their part to answer. For instance, as previously discussed, one of the three outcome variables, unwanted unprotected sex, was based on responses to a question which asked participants to recall instances of unprotected sex with their main partner in the past six months in which they wanted to use a condom but their partner did not want to use one. Participants may have been confused by the wording involved in this question and interpreted it differently from the way that was intended. Further, women were asked to recall their reasons for wanting to use a condom during their last instances of protected and unprotected sex, and their

reasons for not wanting to use a condom in those same situations. If participants were filling out the survey quickly or had reading challenges, they may have missed the subtle differences between these questions. It would, therefore, be very useful to gather additional in-depth qualitative data, perhaps by interviewing young women about their condom use ambivalence and instances of unwanted unprotected sex, in order to circumvent some of the challenges related to complex wording encountered in the current study.

A second limitation involves the two different recruitment methods involved in the current study. As previously noted, out of concern that some young, low-income, women would not have easy internet access in order to complete the survey online, participants were recruited through a secondary method--in-person recruitment. As described in the methods section, researchers attended numerous community events and visited local retail establishments where participants filled out paper and pencil surveys, in an effort to increase participation. However, these two different recruitment methods necessarily resulted in differences in participants' level of confidentiality, which may have led to different patterns of responding between groups. While online participants had to provide their names and mailing addresses in order to be mailed a gift card after finishing the study, participants who filled out the survey in-person were not asked for such identifying information, as the gift card could be handed to them on the spot. Providing this identifying information may have unduly influenced online participants, causing them to respond in more socially desirable ways. In addition, researchers were not able to witness the conditions in which online participants filled out the survey and whether they were alone while taking it, or whether partners, friends, or others were

present and potentially affecting participants' ability to be open and honest in their responses. On the other hand, while they did not have to offer identifying information, in-person participants had to interact directly with and take the study in the presence of the researchers, which may have influenced their perceptions about confidentiality, causing them to over- or under-report their risk-taking behaviors. However, despite these challenges, researchers took precautions in both in-person and online recruitment, to ensure that participants understood that their data would be kept entirely confidential, in order to encourage openness in responding. Additionally, some concerns about the different settings and modes of completion are assuaged by the relatively few significant differences found between participants completing the questionnaire online and on paper.

It also bears consideration that the variables of condom use proportion and condom use percentage were only moderately correlated in the current study, although in theory, the variables should have been measuring the same construct. The fact that these variables were not more strongly correlated in the present study suggests that the variables may, in effect, have been measuring two different constructs, which is potentially problematic and raises concerns about the participants' accuracy in answering these condom use questions. The condom use proportion variable should have been a more exact measurement of condom use (based on participants' reports of times having sex and times using condoms) than the percentage of condom use variable (a simple estimate of percentage of times using a condom); however, it is also potentially challenging for individuals to recall the exact number of instances of protected and unprotected sex over a certain time period (Noar et al., 2006). It may be that individuals in the current study, who were all in ongoing sexual relationships, had difficulty recalling

specific instances of sexual behavior, as sex within their relationships had become more routine or habitual and thus difficult to quantify. Participants may have had an easier time generating a rough estimate of condom use percentage, which requires less specificity in recall. These factors may help to explain the lack of correspondence between the condom use proportion and condom use percentage variables.

In addition, the data in the present study were based on self-reports of sexual behaviors, which is a method with inherent limitations. It is possible that the participants were not able to accurately recall aspects of their specific sexual experiences. In order to enhance recall, the time frame for many questions was limited to sexual behavior during the past six months, or during the most recent instance of a certain behavior. Also, as previously discussed, at times participants were asked to recall not only their past sexual behaviors, but also their cognitions, and their partners' cognitions around these sexual experiences. In future studies, it might be interesting to use a daily diary method, in which participants can record their thoughts and feelings immediately after events occur, to enhance reliability of their responses. Researchers have had success using this method specifically with adolescent and college student populations and have found significant within-person variability across time in condom use self-efficacy, intentions to use condoms, and actual condom use (Fortenberry & Hensel, 2011; Fortenberry, Tu, Harezlak, Katz, & Orr, 2002; Kiene et al., 2008).

Further, an important direction for future research could be to obtain simultaneous responses from both sexual partners involved, in order to see to what extent perception of sexual risk, relationship power, motives for sex, and relationship commitment correspond between partners in a relationship. Kershaw, Arnold, Gordon, Magriples, & Niccolai

(2012) recently conducted a study with a sample of pregnant predominantly African American and Hispanic female adolescents and their male partners and found that the young women and men in their study differed significantly on their likelihood of having a concurrent partner, HIV/STI knowledge, perceived risk for HIV/STIs, attitudes toward condoms, and condom use self-efficacy. It would also be particularly interesting to study couples longitudinally at different points in their relationships to determine whether relationship duration affects relationship commitment, power dynamics, condom use negotiation strategies, and perceptions of sexual risk.

A further limitation to the current study is that, due to a lack of normality, two of the continuous outcome variables had to be dichotomized (unwanted unprotected sex and condom use proportion). This simplification of the variables necessarily resulted in a loss of information, leaving less power to detect associations between the variables in the study. Based on original power analyses, it was determined that adequate power was achieved for a linear regression; however, there may not have been sufficient power for the logistic regression analyses that were conducted using these dichotomized variables.

Finally, it is important to note that this study utilized a particular sample of young African American women from one specific Midwestern city, which has a relatively high HIV/STI rate compared to the national average. In addition, despite efforts to draw a representative community sample, a large number of women ended up being recruited from college campuses; thus a significant proportion of women in the sample had at least some college education (average years of education = 14), which is not representative of all urban African American women in this age group. In addition, it is important to note that young urban African American women are a diverse group. It is not possible to

generalize from these findings to suggest that they would apply to all women in this age range or from this racial/ethnic background.

Conclusions

Overall, the current study suggests that social and relationship factors should be further investigated in relation to HIV/STI prevention efforts, particularly for young, at-risk women from minority groups, such as African Americans, who have experienced historical and societal disadvantage. While gendered relationship power dynamics interacted with condom use self-efficacy in the current study to predict sexual risk, the variables did not relate as expected. Further research is needed to better understand the conditions under which self-efficacy for condom use and relationship power interact to contribute to greater sexual risk and when these factors interact to empower young women to protect themselves. Also, although not originally hypothesized, relationship commitment was found to be a significant predictor of condom use over and above condom use self-efficacy; this finding has particular implications for the African American community, in which the unbalanced gender ratio and stressors associated with poverty may cause women to become highly committed and invested in relationships, perhaps at the detriment of their own health and safety. The present study also suggests that women endorse ambivalence about using condoms, which may affect their condom use decisions, particularly in the context of relationships.

The current study has implications for HIV and STI intervention and programming with young urban African American women. As young people are still actively formulating scripts and consolidating behavioral patterns around sexual risk, it will be important to assess their gendered relationship power dynamics, including

assessing for any intimate partner violence, as well as to understand young women's level of commitment to their relationships, in order to help them create more meaningful, personal safer sex scripts. Given the field's historical focus on individual-level factors, such as self-efficacy and attitudes toward condom use, in preventing sexual risk, the present research add to a growing body of literature which suggests that a more ecological approach that takes into account the context of young women's lives, relationships, and sexual behaviors, is warranted. Results obtained further imply that HIV/STI interventions that accept and work with young women's ambivalence around condom use will be more successful than those which erroneously presume that women are always in favor of using condoms and that they simply need help in negotiating condom use with their partners.

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Appendix A: Screening Questionnaire

Thank you for your interest in our study. Please answer all questions honestly. If you are eligible for the study, we will contact you within 48 hours via email or phone with an online link to take our survey.

Thanks!

1. What is your sex/gender?
   _____ Female
   _____ Male
   _____ Transgendered-Female to Male
   _____ Transgendered-Male to Female
   _____ Intersexed

2. What is your age? _____

3. How do you describe your race? (CHECK ONE OR MORE OPTIONS)
   _____ American Indian/Alaskan Native
   _____ Asian
   _____ Native Hawaiian/Pacific Islander
   _____ Black/African American
   _____ White/European American
   _____ Other (please specify)

4. Do you have a "steady" or "main" sexual partner, that is a partner in a sexual relationship that you consider your *primary or only* relationship?
   _____ I have a main sexual partner.
   _____ I have multiple sexual partners and no "main" partner.
   _____ I am not sexually active.

5. If you have a main partner, what is the sex of your main partner?
   _____ Male
   _____ Female
   _____ Other
   _____ N/A – I do not have a main partner

6. Have you ever been tested for HIV or STDs (sexually transmitted diseases)?
   _____ Yes
   _____ No

7. If you have been tested, when was the last time you visited an STD clinic or received a test for HIV or STDs?
   _____ Within the past month
   _____ Within the past year
   _____ Within the past three years
   _____ Longer than three years ago

8. Where did you hear about our study?
   _____ Craigslist
   _____ Backpage
   _____ Facebook
   _____ Flyer on a school campus
   _____ Flyer at a health clinic

_____ Flyer elsewhere in the community
_____ St. Louis American
_____ From a friend
_____ Other (please specify)

9. Please enter your email address (or your phone number if you prefer to be contacted by phone) below so that we may contact you if you are eligible to complete the study. If you are eligible and complete our survey, you will be mailed your choice of a $15 gift card to Target or a $15 gift card to Schnucks as our thanks!
   _____

Appendix B: Information Sheet

Thank you for participating in our research!

You have just completed a study about risk for sexually transmitted diseases (STDs), like HIV, chlamydia, and gonorrhea, among young African American women.

The rates of STDs are especially high among young African American women in spite of the fact that African American women practice safe sex at the same or higher rates as other young women. This is why we are interested in finding out more about the factors that may lead women to engage in sexual risk-taking behavior, like having unprotected sex with someone at risk for STDs.

In particular, we are interested in learning more about how the context of being in a relationship affects women's decisions about having unprotected sex.

Most of the research that has been done in this area has looked at women's own attitudes about and confidence in using condoms, but we believe that there may be times when decisions about condom use may be affected by the relationship itself, and by the way women feel about their relationships. In this study we also investigated the role of relationship power, reasons for having sex, and relationship commitment as factors that may relate to risky sexual behaviors.

Your participation in this study will help us to better understand how and why women decide to have unprotected sex with their male partners and how decisions about safer sex are made in relationships. We hope that our findings will contribute to the development of more effective intervention strategies aimed at preventing the transmission of STDs and HIV.

If you have any questions that arise about your responses to the questionnaires, or if you are interested in finding out more about the outcome of this research, you are welcome to contact the researcher, Emily Silverman, M.A. (email: Emily.Silverman@umsl.edu; telephone: 314-516-6912) or the Faculty Advisor, Zoë Peterson, Ph.D. (email: Petersonz@umsl.edu; telephone: 314-516-7124).

If this study has brought up any uncomfortable or distressing topics, which you would like to talk more about with a professional, below are several resources that offer low-cost psychotherapy:

Community Psychological Service	314-516-5824
Provident Counseling	314-533-8200
Catholic Family Services	314-544-3800

If you are interested in obtaining testing or treatment for STDs and HIV, please contact one of the following agencies:

St. Louis ConnectCare	314-361-CARE (2273)
The Spot	314-535-0413
Planned Parenthood	314-531-7526
City of St. Louis Department of Health	314-612-5100

Once again, thank you very much for your participation!

Appendix C: Study Survey

Demographics

Please answer all questions honestly.

1. What is your sex/gender?
   _____ Female
   _____ Male
   _____ Transgendered-Female to Male
   _____ Transgendered-Male to Female
   _____ Intersexed

2. What is your age? _____

3. What is your sexual orientation?
   _____ Heterosexual/Straight
   _____ Homosexual/Gay/Lesbian
   _____ Bisexual
   _____ Undecided
   _____ Other (please specify)

4. Would you describe the type of person that you find most sexually attractive as:
   _____ Only female
   _____ Mainly female, but sometimes male
   _____ Equally male and female
   _____ Mainly male, but sometimes female
   _____ Only male

5. Please give the total years of education have you completed, including grade school, high school, and college (e.g. finishing high school would typically involve completing 12 years of education).
   _____

6. Are you currently attending a college, technical school, or university?
   _____Yes _____ No

7. Are you currently employed with a paid job?
   _____ Yes, Full time
   _____ Yes, Part time
   _____ Inconsistently (I am a temporary/seasonal worker)
   _____ No, I am unemployed

8. How do you describe your race? (CHECK ONE OR MORE OPTIONS)
   _____ American Indian/Alaskan Native
   _____ Asian
   _____ Native Hawaiian/Pacific Islander
   _____ Black/African American
   _____ White/European American
   _____ Other (please specify)

9. Are you Hispanic or Latino?
   _____Yes _____ No

10. Do you currently live in the St. Louis metropolitan area?
    _____Yes _____ No

11. What is your zip code?
    _____

12. What is the total annual income of your household including ALL sources of income (all jobs, social security, financial support from friends or family, etc.)?
    _____

13. Are you currently:
    _____ In an exclusive/monogamous sexual relationship (that is, we only have sex with each other)
    _____ In a non-exclusive/non-monogamous sexual relationship (that is, one or both of us has, or has had, sex with others WITHOUT the other partner's knowledge or permission)
    _____ In an open sexual relationship (that is, one or both of us has, or may have, sex with others WITH the other partner's knowledge and permission)
    _____ Not in a sexual relationship

14. If you are currently in a sexual relationship, what is the sex/gender of your partner?
    _____ Male
    _____ Female
    _____ Transgendered-Female to Male
    _____ Transgendered-Male to Female
    _____ Intersexed
    _____ N/A – Not in a relationship

15. If you are currently in a sexual relationship, do you and your partner live together?
    _____Yes
    _____ No
    _____ N/A – Not in a relationship

16. If you are currently in a sexual relationship, for how long have you been in this relationship?
    Years: _____
    Months: _____
    Days: _____

17. What is your marital status?
    _____ Single/Never Married
    _____ Cohabitating/Living Together
    _____ Married
    _____ Separated/Divorced
    _____ Widowed
    _____ Other (please specify)

18. How many people currently live in your home, besides yourself?
    _____ 0
    _____ 1
    _____ 2
    _____ 3
    _____ 4
    _____ 6
    _____ 7
    _____ 8
    _____ 9 or more

19. What is the highest level of education achieved by your mother or female guardian when you were growing up?
_____ Did not finish high school
_____ Finished high school/obtained GED
_____ Completed some college
_____ Finished college
_____ Attended school beyond college
_____ Unknown or no female guardian

20. What is the highest level of education achieved by your father or male guardian when you were growing up?
_____ Did not finish high school
_____ Finished high school/obtained GED
_____ Completed some college
_____ Finished college
_____ Attended school beyond college
_____ Unknown or no male guardian

21. Do you have any children?
_____Yes
_____ No

22. If yes, how many children do you have?
_____

23. Are you currently pregnant?
_____ Yes
_____ No

24. Are you currently trying to become pregnant?
_____ Yes
_____ No

22. Are you currently using some form of regular hormonal birth control, such as Birth Control Pills, Birth Control Shot (Depo-Provera), Birth Control Implant, Birth Control Patch, or IUD?
_____ Yes
_____ No

Sexual History

Please answer all questions honestly.

1. How old were you the first time you had vaginal sexual intercourse (penis-in-vagina sex)?
_____

2. IN YOUR LIFETIME, with how many people have you had vaginal sexual intercourse? Please enter a number (no letters or words).
_____

3. Of the number you gave in the previous question, with how many of these sexual partners IN YOUR LIFETIME did you CONSISTENTLY (every time you had vaginal sexual intercourse) use a condom? Please enter a number (no letters or words).

_____

4. IN THE PAST 6 MONTHS, with how many people have you had vaginal sexual intercourse? Please enter a number (no letters or words).

   _____

5. OF the number you gave in the previous question, with how many of these sexual partners IN THE PAST SIX MONTHS did you CONSISTENTLY (every time you had vaginal sexual intercourse) use a condom? Please enter a number (no letters or words).

   _____

6. Do you have a "steady" or "main" sexual partner, that is a partner in a sexual relationship that you consider your PRIMARY or ONLY relationship?
   _____ I have a main sexual partner.
   _____ I have multiple sexual partners and no "main" partner.
   _____ I am not sexually active.

7. IN THE PAST 6 MONTHS, approximately how many times have you and your MAIN partner had vaginal sexual intercourse? (If you have been in a relationship with your partner for less than 6 months, approximately how many times have you and your partner had sex in the course of your relationship?) Please enter a number (no letters or words) .

   _____

8. Of the number you gave in the previous question, approximately how many of those times did you and your MAIN partner use a condom? Please enter a number (no letters or words).

   _____

9. The LAST TIME you had sex with your MAIN partner, did you use a condom?
   _____ Yes
   _____ No

10. The LAST TIME you had sex with your MAIN partner, were you under the influence of alcohol or drugs?
    _____ Yes
    _____ No

11. The LAST TIME you had sex with your MAIN partner, was your partner under the influence of alcohol or drugs?
    _____ Yes
    _____ No

12. Have you ever had vaginal sex WITH a condom?
    _____Yes
    _____No

    If yes, think about the LAST TIME you engaged in sex WITH a condom.

    a) Was your sexual partner for this activity:
    ____Your CURRENT MAIN sexual partner
    ____A PREVIOUS MAIN sexual partner
    ____A CURRENT CASUAL sexual partner
    ____A PREVIOUS CASUAL sexual partner

b) Who initiated the sexual activity?
___I did
___My partner did
___We both did
___Neither of us did (please explain:_____)

c) How did you decide to use a condom in this situation?

d) To what degree did you want to use a condom in this situation?
____ I STRONGLY preferred NOT TO use a condom
____ I MODERATELY preferred NOT TO use a condom
____ I SLIGHTLY preferred NOT TO use a condom
____ I did not care whether we used a condom or not
____ I SLIGHTLY preferred TO use a condom
____ I MODERATELY preferred TO use a condom
____ I STRONGLY preferred TO use a condom

e) What were your reasons, if any, for WANTING to use a condom in this situation?

f) What were your reasons, if any, for NOT WANTING to use a condom in this situation?

13. Have you ever had vaginal sex WITHOUT a condom?
_____Yes
_____No

If yes, think about THE LAST TIME you engaged in sex WITHOUT a condom.

a) Was your sexual partner for this activity:
____Your CURRENT MAIN sexual partner
____A PREVIOUS MAIN sexual partner
____A CURRENT CASUAL sexual partner
____A PREVIOUS CASUAL sexual partner

b) Who initiated the sexual activity?
____I did
____My partner did
____We both did
____Neither of us did (please explain:_____)

c) How did you decide not to use a condom in this situation?

d) To what degree did you want to use a condom in this situation?
____ I STRONGLY preferred NOT TO use a condom
____ I MODERATELY preferred NOT TO use a condom
____ I SLIGHTLY preferred NOT TO use a condom
____ I did not care whether we used a condom or not
____ I SLIGHTLY preferred TO use a condom
____ I MODERATELY preferred TO use a condom
____ I STRONGLY preferred TO use a condom

e) What were your reasons, if any, for WANTING to use a condom in this situation?

f) What were your reasons, if any, for NOT WANTING to use a condom in this situation?

14. IN THE PAST 6 MONTHS, in your current relationship with your MAIN partner, approximately how many times have you had sex WITHOUT a condom when you wanted to use a condom (at least to some degree) and your partner did not want to use one? (If you have been in a relationship with your partner for less than 6 months, approximately how many times has this occurred in the course of your relationship?).

    If this has not occurred in the past 6 months (or in the course of your relationship if shorter than 6 months), put a 0 in the box. Please enter a number (no letters or words).
    _____

    a) Think about the LAST TIME you had sex WITHOUT a condom when you wanted to use a condom and your partner did not want to use one. To what degree did you want to use a condom in that situation? *(Participants given a 5-point scale with the following markers: 1= Slightly, 3= Moderately, 5= Strongly).*

    b) What made you decide to have sex WITHOUT a condom in that situation?
    _____

15. IN THE PAST 6 MONTHS, in your current relationship with your MAIN PARTNER, approximately how many times have you had sex WITH a condom when you did not want to use a condom, but your partner wanted to use one (at least to some degree)? (If you have been in a relationship with your partner for less than 6 months, approximately how many times has this occurred in the course of your relationship?)

    If this has not occurred in the past 6 months (or in the course of your relationship if shorter than 6 months), put a 0 in the box. Please enter a number (no letters or words).
    _____

    a) Think about the LAST TIME you had sex WITH a condom when you did not want to use a condom, but your partner wanted to use one. To what degree did you NOT want to use a condom in that situation? *(Participants given a 5-point scale with the following markers: 1= Slightly, 3= Moderately, 5= Strongly).*

    b) What made you decide to have sex WITH a condom in that situation?
    _____

16. How often do you and your MAIN partner have vaginal (penis-in-vagina) sex without a condom?
    _____ We NEVER use condoms for vaginal sex.
    _____ We SOMETIMES use condoms for vaginal sex.
    _____ We ALWAYS use condoms for vaginal sex.
    _____ We do not have vaginal sex.

17. What percentage of the time do you and your MAIN partner use condoms when having vaginal sex? Please enter a number from 0-100%. 0% indicates that you have never used a condom during vaginal sex with your partner and 100% indicates that you have used a condom every time you have had vaginal sex.
    _____

18. How often do you and your MAIN partner have anal (penis-in-butt) sex without a condom?
    _____ We NEVER use condoms for anal sex.
    _____ We SOMETIMES use condoms for anal sex.
    _____ We ALWAYS use condoms for anal sex.
    _____ We do not have anal sex.

19. What percentage of the time do you and your MAIN partner use condoms when having anal sex? Please enter a number from 0-100%. 0% indicates that you have never used a condom during anal sex with your partner and 100% indicates that you have used a condom every time you have had anal sex.

    _____

20. How often do you perform oral (penis-in-mouth) sex on your MAIN partner without a condom?
    _____ We NEVER use condoms for oral sex.
    _____ We SOMETIMES use condoms for oral sex.
    _____ We ALWAYS use condoms for oral sex.
    _____ We do not have oral sex.

21. What percentage of the time do you and your MAIN partner use condoms when you are performing oral sex? Please enter a number from 0-100%. 0% indicates that you have never used a condom while performing oral sex on your partner and 100% indicates that you have used a condom every time you have performed oral sex.

    _____

22. In general, how, if at all, do you let your partner know when you want to use a condom during sex?

    _____

23. In general, what, if anything, keeps you from talking to your partner about condom use when you want to use a condom?

    _____

24. Has a nurse or doctor ever told you that you were infected with any of the following sexually transmitted infections (STIs)?
    _____ Gonorrhea (Clap)
    _____ Genital Herpes
    _____ Chlamydia
    _____ Syphilis
    _____ HPV or Genital Warts
    _____ Hepatitis B
    _____ Trichomoniasis
    _____ Other (please specify)

25. To your knowledge, has your MAIN partner ever been diagnosed with any of the following sexually transmitted infections (STIs)?
    _____ Gonorrhea (Clap)
    _____ Genital Herpes
    _____ Chlamydia
    _____ Syphilis
    _____ HPV or Genital Warts
    _____ Hepatitis B
    _____ Trichomoniasis
    _____ Other (please specify)

26. Have you ever been tested for HIV?
    _____Yes
    _____No

27. What is your HIV status?
    _____ I am HIV negative

_____ I am HIV positive
_____ I do not know my HIV status

28. To your knowledge, has your MAIN sexual partner ever been tested for HIV?
_____Yes
_____No

29. Do you know your MAIN sexual partner's HIV status?
_____ My main partner is HIV negative
_____ My main partner is HIV positive
_____ I do not know my main partner's HIV status

30. Are you currently having sex (oral, anal, or vaginal intercourse) with other MEN outside of your main sexual relationship?
_____Yes
_____No

31. Are you currently having sex with other WOMEN (oral sex) outside of your main sexual relationship?
_____Yes
_____No

32. Do you believe that your MAIN sexual partner is having sex (oral, anal, or vaginal intercourse) with other WOMEN outside of your relationship?
_____ I know FOR SURE that my partner IS having sex with other women outside of our relationship
_____ I believe, BUT DO NOT KNOW FOR SURE, that my partner IS having sex with other women outside of our relationship
_____ I do not know if my partner is having sex with other women outside of our relationship
_____ I believe, BUT DO NOT KNOW FOR SURE, that my partner IS NOT having sex with other women outside of our relationship
_____ I know FOR SURE that my partner IS NOT having sex with other women outside of our relationship

33. Do you believe that your MAIN sexual partner is having sex (oral or anal sex) with MEN outside of your relationship?
_____ I know FOR SURE that my partner IS having sex with men outside of our relationship
_____ I believe, BUT DO NOT KNOW FOR SURE, that my partner IS having sex with men outside of our relationship
_____ I do not know if my partner is having sex with men outside of our relationship
_____ I believe, BUT DO NOT KNOW FOR SURE, that my partner IS NOT having sex with men outside of our relationship
_____ I know FOR SURE that my partner IS NOT having sex with men outside of our relationship

34. To your knowledge, has your MAIN sexual partner ever used injecting drugs (e.g., cocaine, ketamine, heroine, steroids)?
_____Yes
_____No

35. Have you ever used injecting drugs (e.g., cocaine, ketamine, heroine, steroids)?
_____Yes
_____No

36. To your knowledge, has your MAIN sexual partner ever spent more than 24 hours in prison?
    _____Yes
    _____No

37. Have you ever spent more than 24 hours in prison?
    _____Yes
    _____No

38. Have you ever been pregnant?
    _____Yes
    _____No

39. Of the pregnancies that you have had,
    a. How many have ended in abortion? _____
    b. How many have ended in miscarriage? _____
    c. How many have resulted in live births? _____

40. Of the pregnancies you have had, how many were planned? _____

41. Of the pregnancies you have had, how many were unplanned? _____

Investment Model Scale (IMS), *Rusbult et al., 1998*

1. Please indicate the degree to which you agree with each of the following statements regarding your current relationship with your MAIN PARTNER *(Participants select from the following choices:* Don't Agree At All, Agree Slightly, Agree Moderately, or Agree Completely*).*

(a) My partner fulfills my needs for intimacy (sharing personal thoughts, secrets, etc.).
(b) My partner fulfills my needs for companionship (doing things together, enjoying each other's company, etc.).
(c) My partner fulfills my sexual needs (holding hands, kissing, etc.).
(d) My partner fulfills my needs for security (feeling trusting, comfortable in a stable relationship, etc.).
(e) My partner fulfills my needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.).

For the following questions, please select a response that best fits the way you feel about your current relationship with your MAIN PARTNER *(Participants will be given an 8-point scale with the following markers: 0= Do Not Agree At All, 4= Agree Somewhat, 8 = Agree Completely).*

2. I feel satisfied with our relationship.
3. My relationship is much better than others' relationships.
4. My relationship is close to ideal.
5. Our relationship makes me very happy.
6. Our relationship does a good job of fulfilling my needs for intimacy, companionship, etc.

1. Please indicate the degree to which you agree with each statement regarding the fulfillment of each need in alternative relationships other than your current relationship with your MAIN PARTNER (e.g., by another dating partner, friends, family). *(Participants*

select from the following choices: Don't Agree At All, Agree Slightly, Agree Moderately, or Agree Completely)

(a) My needs for intimacy (sharing personal thoughts, secrets, etc.) could be fulfilled in alternative relationships.
(b) My needs for companionship (doing things together, enjoying each other's company, etc.) could be fulfilled in alternative relationships.
(c) My sexual needs (holding hands, kissing, etc.) could be fulfilled in alternative relationships.
(d) My needs for security (feeling trusting, comfortable in a stable relationship, etc.) could be fulfilled in alternative relationships.
(e) My needs for emotional involvement (feeling emotionally attached, feeling good when another feels good, etc.) could be fulfilled in alternative relationships.

For the following questions, please select a response that best fits the way you feel about your current relationship with your MAIN PARTNER *(Participants will be given an 8-point scale with the following markers: 0= Do Not Agree At All, 4= Agree Somewhat, 8 = Agree Completely).*

2. The people other than my partner with whom I might become involved are very appealing.
3. My alternatives to our relationship are close to ideal (dating another, spending time with friends or on my own, etc.).
4. If I weren't dating my partner, I would do fine — I would find another appealing person to date.
5. My alternatives are attractive to me (dating another, spending time with friends or on my own. etc.).
6. My needs for intimacy, companionship, etc., could easily be fulfilled in an alternative relationship.

1. Please indicate the degree to which you agree with each of the following statements regarding your current relationship with your MAIN PARTNER *(Participants select from the following choices: Don't Agree At All, Agree Slightly, Agree Moderately, or Agree Completely)*

   (a) I have invested a great deal of time in our relationship.
   (b) I have told my partner many private things about myself (I disclose secrets to him/her).
   (c) My partner and I have an intellectual life together that would be difficult to replace.
   (d) My sense of personal identity (who I am) is linked to my partner and our relationship.
   (e) My partner and I share many memories.

For the following questions, please select a response that best fits the way you feel about your current relationship with your MAIN PARTNER *(Participants will be given an 8-point scale with the following markers: 0= Do Not Agree At All, 4= Agree Somewhat, 8 = Agree Completely).*

2. I have put a great deal into our relationship that I would lose if the relationship were to end.
3. Many aspects of my life have become linked to my partner (recreational activities, etc.), and I would lose all of this if we were to break up.
4. I feel very involved in our relationship — like I have put a great deal into it.
5. My relationships with friends and family members would be complicated if my partner and I were to break up (e.g., my partner is friends with people I care about).
6. Compared to other people I know, I have invested a great deal in my relationship with my partner.

For the following questions, please select a response that best fits the way you feel about your current relationship with your MAIN PARTNER *(Participants will be given an 8-point scale with the following markers: 0= Do Not Agree At All, 4= Agree Somewhat, 8 = Agree Completely).*

1. I want our relationship to last for a very long time.
2. I am committed to maintaining my relationship with my partner.
3. I would not feel very upset if our relationship were to end in the near future.
4. It is likely that I will date someone other than my partner within the next year.
5. I feel very attached to our relationship — very strongly linked to my partner.
6. I want our relationship to last forever.
7. I am oriented toward the long-term future of my relationship (for example, I imagine being with my partner several years from now).

Sexual Relationship Power Scale (SRPS), *Pulerwitz, Gortmaker, and DeJong (2000)*

Please respond to the following items as they apply to your current relationship with your MAIN PARTNER. Choose the response that best applies to you.

(Participants select from the following choices: Strongly Agree, Agree, Disagree, or Strongly Disagree).

1. If I asked my partner to use a condom, he would get violent.
2. If I asked my partner to use a condom, he would get angry.
3. Most of the time, we do what my partner wants to do.
4. My partner won't let me wear certain things.
5. When my partner and I are together, I'm pretty quiet.
6. My partner has more say than I do about important decisions that affect us.
7. My partner tells me who I can spend time with.
8. If I asked my partner to use a condom, he would think I'm having sex with other people.
9. I feel trapped or stuck in our relationship.
10. My partner does what he wants, even if I do not want him to.
11. I am more committed to our relationship than my partner is.
12. When my partner and I disagree, he gets his way most of the time.
13. My partner gets more out of our relationship than I do.
14. My partner always wants to know where I am.
15. My partner might be having sex with someone else.

(Participants select from the following choices: Your Partner, Both of you Equally, or You).

16. Who usually has more say about whose friends to go out with?
17. Who usually has more say about whether you have sex?
18. Who usually has more say about what you do together?
19. Who usually has more say about how often you see one another?
20. Who usually has more say about when you talk about serious things?
21. In general, who do you think has more power in your relationship?
22. Who usually has more say about whether you use condoms?
23. Who usually has more say about what types of sexual acts you do?

Condom Use Self-Efficacy Scale (CUSES), *Brafford and Beck (1991)*

These questions ask about your own feelings about using condoms in specific situations. *(Participants select from the following choices: Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree).*

1. I feel confident in my ability to put a condom on myself or my partner.
2. I feel confident I could purchase condoms without feeling embarrassed.
3. I feel confident I could remember to carry a condom with me should I need one.
4. I feel confident in my ability to discuss condom usage with any partner I might have.
5. I feel confident in my ability to suggest using condoms with a new partner.
6. I feel confident I could suggest using a condom without my partner feeling "diseased."
7. I feel confident in my own or my partner's ability to maintain an erection while using a condom.
8. I would feel embarrassed to put a condom on myself or my partner.
9. If I were to suggest using a condom to a partner, I would feel afraid that he or she would reject me.
10. If I were unsure of my partner's feelings about using condoms, I would not suggest using one.
11. I feel confident in my ability to use a condom correctly.
12. I would feel comfortable discussing condom use with a potential sexual partner before we ever had any sexual contact (e.g. hugging, kissing, caressing, etc.).
13. I feel confident in my ability to persuade a partner to accept using a condom when we have intercourse.
14. I feel confident I could gracefully remove and dispose of a condom when we have intercourse.
15. If my partner and I were to try to use a condom and did not succeed, I would feel embarrassed to try to use one again (e.g. not being able to unroll condom, putting it on backwards, or awkwardness).
16. I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I've had a homosexual experience.
17. I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I have a sexually transmitted disease.
18. I would not feel confident suggesting using condoms with a new partner because I would be afraid he or she would think I thought they had a sexually transmitted disease.
19. I would feel comfortable discussing condom use with a potential partner before we ever engaged in intercourse.
20. I feel confident in my ability to incorporate putting a condom on myself or my partner into foreplay.
21. I feel confident that I could use a condom with a partner without "breaking the mood."
22. I feel confident in my ability to put a condom on myself or my partner quickly.
23. I feel confident I could use a condom during intercourse without reducing any sexual sensations.
24. I feel confident that I would remember to use a condom even after I have been drinking.
25. I feel confident that I would remember to use a condom even if I were high.
26. If my partner didn't want to use a condom during intercourse, I could easily convince him or her that it was necessary to do so.
27. I feel confident that I could use a condom successfully.
28. I feel confident I could stop to put a condom on myself or my partner even in the heat of passion.

Sexual Motivation Scale (SMS), *Cooper et al. (1998)*

For each statement, please select the rating that best describes how often you personally have sex in your current relationship with your MAIN PARTNER for each of the following reasons. Remember - there are no right or wrong answers. We just want to know what you think. *(Participants select from the following choices: Almost Never/Never, Some of the Time, About Half of the Time, Most of the Time, or Almost Always/Always).*

1) How often do you have sex because it feels good?
2) How often do you have sex to reassure yourself that you are sexually desirable?
3) How often do you have sex to help you feel better about yourself?
4) How often do you have sex to prove to yourself that your partner thinks you're attractive?
5) How often do you have sex just for the thrill of it?
6) How often do you have sex to express love for your partner?
7) How often do you have sex because it makes you feel like you're a more interesting person?
8) How often do you have sex to become more intimate with your partner?
9) How often do you have sex to satisfy your sexual needs?
10) How often do you have sex to feel emotionally close to your partner?
11) How often do you have sex to make an emotional connection with your partner?
12) How often do you have sex because you feel "horny?"
13) How often do you have sex just for the excitement of it?
14) How often do you have sex to become closer with your partner?
15) How often do you have sex because it makes you feel more self-confident?
16) How often do you have sex because you don't want your partner to be angry with you?
17) How often do you have sex because it helps you feel better when you're lonely?
18) How often do you have sex to cope with upset feelings?
19) How often do you have sex to help you deal with disappointment in your life?
20) How often do you have sex because you worry that people will talk about you if you don't have sex?
21) How often do you have sex because people will think less of you if you don't?
22) How often do you have sex because others will kid you if you don't?
23) How often do you have sex because it helps you feel better when you're feeling low?
24) How often do you have sex just because all your friends are having sex?
25) How often do you have sex so that others won't put you down about not having sex?
26) How often do you have sex because you worry that your partner won't want to be with you if you don't?
27) How often do you have sex to cheer yourself up?
28) How often do you have sex because you're afraid that your partner will leave you if you don't?
29) How often do you have sex out of fear that your partner won't love you anymore if you don't?