

GENDER DISPARITIES IN COLLEGE STUDENT CONDOM USE

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ABSTRACT

Sexually transmitted diseases are a major public health problem that can be effectively prevented through condom use. The number of young adults in colleges contracting STDs has been increasing exponentially in recent years, especially among women. The purpose of this assessment is to summarize the specific factors associated with condom use, and how these factors relate to differences in STDs in young college men and women. Addressing condom use in college populations involves understanding gender-specific barriers and relationship power dynamics. According to past literature findings, increasing condom use in young adults primarily relies on empowering women in relationships where they perceive themselves to have low power and increasing their sexual assertiveness. This review explores various studies to examine the application of behavioral health theories, identify common themes in gender differences in college populations and to aid the development of appropriate interventions.

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CHAPTER 1

INTRODUCTION

The sexually transmitted disease (STD) epidemic in the United States has worsened in recent years and is prominent among young people. Twenty million new STDs are diagnosed yearly and more than half are among people aged 14-25 (CDC, 2015). This epidemic is especially salient among young women due to the potential lifelong repercussions, such as infertility, heart disease, cervical cancer, pelvic inflammatory disease and infection of newborns (CDC, 2015). In addition, many STDs are related to the human immunodeficiency virus (HIV), meaning people that contract an STD such as Chlamydia, gonorrhea and syphilis are more likely to contract HIV compared to people without STDs (CDC, 2015; Woolf & Maistor, 2008). This is because contracting one STD causes inflammation, which can injure blood vessels and make them more susceptible to viruses such as the HIV virus (Anderson, 2003; Woolf & Maistro, 2008). HIV is a dangerous virus since it can often lead to acquired immune deficiency syndrome (AIDS) and death. Adolescents and young adults account for approximately half of all new STD infections in the United States (CDC, 2015).

HIV and all other STDs disproportionately affect racial and ethnic minorities. The prevalence of HIV is particularly troublesome among African Americans, with an approximate 9 times higher rate than Whites, and for Latinos with an approximate 2 times higher rate than White counterparts (CDC, 2011). Gender disparities are even

higher among ethnoracial groups with African American women reporting 18 times the rate of HIV in comparison to White women and Latinas reporting approximately 4 times the rate of HIV in comparison to White women (CDC, 2011; Hemmige, McFadden, Cook, Tang, & Schneider, 2012). All STDs, including AIDS, are most commonly spread by sexual behavior and are most effectively prevented via condom use (CDC, 2014).

When it comes to prevention of STDs, including HIV, condom use is highly effective provided that the condom is used correctly every time one engages in sexual activity (CDC, 2015). Condom use among young adults remains relatively low despite the knowledge of the risks of unprotected sex, the health ramifications of STDs, and the effectiveness of correct condom use in preventing STDs. An alarming lack of condom use has been reported with less than 20% of people in an ongoing relationship reporting using condoms during sexual intercourse (Anderson, 2003; Misovich, Fisher, J., & Fisher W., 1997). A survey conducted by the American College Health Association (ACHA) in 2012 revealed that according to student reports, almost half of all college students engaged in vaginal sex in the prior month and of these students approximately half used a condom during intercourse (ACHA, 2015).

Not only are many young adults having unprotected sex but they do not seem concerned about their chances of contracting STDs. This lack of concern contributes to the neglect of condom use (ACHA, 2015). In comparing racial group differences, findings from several studies demonstrate a decreased frequency of condom usage among African Americans compared to Whites (Krings, Matteson, Allsworth, Mathias, & Peipert, 2008; Santelli, Lindberg, Fine, & Singh, 2007; Thorburn & Bogart, 2005) while results from another study showed African Americans were more likely to use condoms

during sexual encounters (Buhi, Marhefka, & Hoban, 2010). When studies factor gender into the ethnoracial disparities, young African American women have the lowest rates of condom and other contraceptive use (Krings et al., 2008; Thornburn & Bogart, 2005).

Addressing condom use in the minority and college student population involves understanding gender- specific barriers and relationship power dynamics (Wingood & DiClemente, 2000), as well as ethnoracial factors (Hemmige et al., 2012).

CHAPTER 2

REVIEW OF THE LITERATURE

Condom Use in College Student Population

Approximately 34% of new cases of HIV and AIDS are recorded among men and women between the ages of 20 and 24 (CDC, 2014). It is likely that this age group is contracting the infection through unprotected heterosexual sexual encounters during their early college years given 20.5 million college students, full-time and part-time, are estimated to attend a 4-year university in the United States in 2016 (National Center for Education Statistics, 2016). It is important to increase understanding for the role of sex practices among this age group as it could be linked to the high frequency among adolescents and young adults attending 4-year universities choosing not to engage in condom use, despite popular belief that college students are more informed about safe sex practices (Gullette & Lyons, 2006). There appears to be a discrepancy between knowledge of sexual risk and engaging in healthy sexual behaviors for college students. For the purposes of this paper risky sexual behavior is defined as unprotected sex, specifically sex without a condom. Condoms are an effective form of prophylactics to prevent transmission of infection (i.e., HIV/AIDS) and contraception against unwanted pregnancies when used consistently.

The college students is a populations important to further explore because it is developmentally a time in the life span in which people are transitioning from

adolescence to young adulthood and may be more open to new sexual experiences and risky sexual behaviors (i.e., inconsistently use condoms or have sex with multiple partners) to further their identity exploration (Arnett, 2000). According to the American College Health Association (2015), only 50.2% of college students from a national sample reported using a condom during vaginal intercourse and upwards of 10% reported having sexual intercourse with 4 or more individuals in the past 30 days. It appears to be a time of increased freedom since adolescents and young adults are often living on a college campus and has fewer responsibilities and roles of adults (i.e., marriage, parenting, and careers to sustain). From an ecodevelopmental perspective, social support may impact the protective factors for sexual behaviors in adolescents (Perrino, Gonzalez-Soldevilla, Pantin, & Szapocznik, 2000); however, research refutes that communication within the family and community about sexual safety are predictive of condom use (Small, Weinman, Buzi, & Smith, 2010). Additionally, studies have shown that college students under the influence of alcohol and drugs are also more likely to inconsistently utilize condoms (Gullette & Lyons, 2006; Parsons, Halkitis, Bimbi, & Borkowski, 2000; Wagner, 2001).

In comparing sexual behavior among African American college students versus White college students, findings indicated no statistical differences between the races on occurrence of vaginal sex. However, in a study of approximately 43,000 students (Buhi, Marhefka, & Hoban, 2010), African Americans were more likely to have multiple sex partners, were more likely to use a condom, and were tested for HIV more frequently yet have higher incidences of STDs. In addition, African American college women reported 4 times as many unintended pregnancies as White college women in the last school year,

leading the researchers to conclude that while African American students may have used more condoms, the usage was not consistent (Buhi et al., 2010). These differences among gender and racial groups were mirrored in all age group studies (Krings et al., 2008; Santelli et al., 2007; Thorburn & Bogart, 2005).

Young Women and Condom Use

An increasing number of heterosexual women in the United States are contracting HIV and other STDs, with rates among females ages 16-21 being higher than males of the same age group (CDC, 2008). According to the Center for Disease Control (CDC), AIDS cases for young women increased from 7% to 27% in the last two decades with the vast majority of transmission (84%) stemming from heterosexual encounters (CDC, 2015). Most women with STDs are between the ages of 14 and 25 (CDC, 2015).

Young women encounter barriers to condom use that decrease the likelihood of discussing and implementing safe sex practices (Woolf & Maisto, 2008). Several factors have been found to predict condom use for college women. One such factor is relationship satisfaction, especially when it is combined with another factor, attachment style (Strachman & Impett, 2009). Women who have higher relationship satisfaction, feel more bonded in their relationship and have low attachment avoidance are less likely to use condoms during intercourse (Strachman & Impett, 2009). Additionally, women with high attachment anxiety are less likely to use condoms, regardless of relationship satisfaction (Bailey, Haggerty, White, & Catalano, 2011; Schachner & Shaver, 2004; Strachman & Impett, 2009).

Regardless of attachment style, women in long-term committed relationships with men use condoms less than women in non-monogamous sexual relationships (Alvarez &

Garcia-Marques, 2011; Lehmiller, VanderDrift, & Kelly, 2014). This phenomenon may have to do with stigma associated with condom negotiation in committed relationships (Fehr, Vidourek, & King, 2015) or the idea that forgoing condom use during sex is romantic and conveys intimacy (Alvarez & Garcia-Marques, 2011). It appears that conveying intimacy, trust and romance during intercourse is more important to college students than condom usage, especially among students who believe that there is a low risk associated with unprotected sex or who perceive their partners to be trustworthy (Fehr et al., 2015). Casual and steady sexual partnerships differ in condom use (Reid & Aiken, 2011). Some studies attribute factors such as attitude and partner norms in predicting condom use for women with steady partners, while self-efficacy significantly predicted condom use for women with casual partners (Reid & Aiken, 2011). Literature supports the belief that condom use in a long-term, serious relationship suggests lack of trust or infidelity (Woolf & Maistor, 2008). Students will often make assumptions about their partner's sexual health that are not based on STD testing but rather on perceptions and trustworthiness (Civic, 2000). In a study about perceived costs and benefits of condom use and unprotected sex, women reported more benefits than costs for greater self-efficacy for condom use and safer sex practices (Parsons, et al., 2000).

Another important predictor of condom use is perceived power. When women perceive themselves to have low power in their relationship with a male partner, they are less likely to use condoms or to communicate to their partner about condom usage (Woolf & Maisto, 2008). In these cases, the decision to use or not use a condom or not during intercourse is made by the male partner (Fehr et al., 2015). Additionally, women with low power who view sexual assertiveness as threatening to the bond with their male

partner are more willing to take the risk of non-condom use than to risk creating conflict in the relationship by suggesting or insisting on the use of a condom during intercourse (Logan, Cole, & Leukefeld, 2002). Alternatively, when women perceive themselves to have equal power in the relationship, they are more likely to assertively discuss condom usage with their partner and share in the decision-making (Woolf & Maisto, 2008).

Due to women's biological susceptibility to STDs and HIV as well as male power and privilege, women have been characterized as being more at risk than their male counterparts in what is known as the vulnerability paradigm. This viewpoint could help facilitate greater intervention efforts to assist women to engage in protective sex, yet this perspective can also hinder women's power and agency (Higgins, Hoffman, & Dworkin, 2010). Risks are likely to be underlying within the structure of the environment. Globally, structural pathways to HIV risk for women are rooted in economic and gender inequalities, which include a lack of access to health information and HIV prevention services, lack of knowledge or skills to prevent HIV, and intimate partner violence (Krishnan et al., 2008).

This paper is solution focused specifically on heterosexual women due to a lack of research upon women who have sex with women (WSW). The transmission of HIV is much less common in women who have sex with women (CDC, 2014). Although, WSW are also at risk because oral sex can exchange vaginal fluids and blood with HIV in mucous membranes, despite absence of semen; therefore, condoms can be encouraged on sex toys, as well as other barriers during sexual activities such as dental dams and gloves (CDC, 2013). Bacterial vaginosis (BV) is the most common STD in WSW and WSW are

2.5 times more likely than heterosexual women to contract BV, which can lead to several consequences such as increased susceptibility to HIV (White, 2007).

Young Men and Condom Use

Systematic research is limited for heterosexual men and safer sex prevention efforts throughout the course of the AIDS/HIV epidemic (Campbell, 1995; Exner et al., 1999; Higgins et al., 2010). For men who have sex with men (MSM), the HIV/AIDS epidemic continues to be a prominent issue and MSM remains the largest high-risk category for transmission of infection; however, the growing prevalence among heterosexual couples points to heterosexual men as a lesser understood group. Sexual orientation in nature does not account for men who may be secretly having sex with men as well as men who engage in other risky non-sexual behaviors, such as IV drug use. When it comes to heterosexual men's intention and self-efficacy to use condoms, preparatory behaviors, such as buying condoms, carrying condoms or negotiating condom use, have been found to play a mediatory role (Carvalho, Alvarez, Barz, & Schwarzer, 2015).

Several models have been applied to conceptualize condom use behavior in young adult college males. For example, the Information-Motivation-Behavioural Skills Model (IMB) attempts to facilitate intervention at the fundamental levels of information, motivation and behavior to initiate change behaviors for reduction of HIV/AIDS risk (Fisher & Fisher, 1992). At the individual behavioral level, these models support how men utilize their motivation to protect themselves from perceived health risks; however, there continues to be a gap in the research that is not justified by merely the knowledge of men. Indications for effective intervention programs are not clear due to inconsistent

condom use among various intervention types (i.e., informational, condom skills/distribution, behavioral skills, HIV counseling and testing, individual risk counseling and community outreach) (Exner et al., 1999).

Trends in the literature that account for non condom use within the heterosexual men category are avoidance of pregnancy for the female partner, which rely on oral contraceptives by partner, reduction in sexual pleasure, interruption of the passion/ revealing male vulnerability, trust and safety in monogamy, and the assumption that the heterosexual community is sexually safe (Flood, 2003). Men are more likely to provide the condoms, however they rely on their female partners to initiate usage (Carter, McNair, Corbin, & Williams, 1999). Men also report convincing their partners to forgo usage of a condom during sex because they perceive less sexual enjoyment (Carter et al., 1999; Shearer, Hosterman, Gillen, & Lefkowitz, 2005). When college males are using a condom, an interpersonal process, such as gaining support from one's sexual partner, is important in increasing condom use behavior (Noar, Morokoff, & Redding, 2001). Additionally, men with a history of child sexual abuse (CSA) have been shown to engage in more unprotected sex and with more partners than men without a history of CSA (Dilorio, Hartwell, & Hansen, 2002; Senn, Carey, Venable, Coury-Doniger, & Urban, 2006). Another significant variable emerging in gender models that predicts unprotected sex is depression, for men but not for women (Lehrer, Shrier, Gortmaker, & Buka, 2006; Morokoff et al., 2009; Shrier, Ancheta, Goodman, Chiou, Lyden, & Emans, 2001).

In a study about men's perception of women relating to condom use, men viewed women as less likeable when they provided condoms in a sexual situation (Young, Penhollow, & Bailey, 2010). It appears that both men and women perceive women who

possess condoms unfavorably and more promiscuous (Frankel & Curtis, 2008). Thus, the provision of condoms during a sexual encounter becomes the man's responsibility. Male attitudes consistent with hegemonic masculine norms (gender power imbalance) negatively influence condom use behavior among heterosexual males (Leddy, Chakravarty, Dladla, de Bruyn, & Darbes, 2015). The application of many psychological theories to preventive behavior fails to recognize the issues that traditional gender roles impose upon safer sex practices, such as the rigidity to change, power imbalances and male privilege within the context of heterosexual relationships (Amaro, 1995; Campbell, 1995). However, some perspectives, such as the women's vulnerability model, presume men are more likely to engage in risky sex and not want to protect themselves (Higgins et al., 2010). While the vulnerability paradigm appears to construct a victim narrative, power differentials are illuminated and support the notion that women continue to be subjected to traditional gender norms that stem from the power linked to male privilege that is beyond the individual's control. More often than not, decisions to use a condom are more strongly influenced by men than women within heterosexual relationships (Camilleri Kohut, & Fisher, 2015; Campbell, 1995). To extend to other variables related to male power, male compared to female college students have been found to be three times more likely to be sexually coercive as women (Ménard, Hall, Phung, Ghebrial, & Martin, 2003).

African Americans and Condom Use

STDs disparately affect the African American population, with some rates as high as 19 times more prevalent among African American than White adults (James, Simpson, Chamberlain, 2008; Santelli et al., 2006). Low rates of condom use and other

contraceptives among African American women may be due to several cultural and racial factors. Within a cross-sectional, national study examining African American sexual behaviors and attitudes towards condom use, 71 participants (ages 18-45; 61% female) were randomly sampled in order to assess implications of HIV/AIDS conspiracy beliefs, such as birth control as a form of black genocide and lack of trust in the government due to perceived exploitation of African Americans when testing new HIV medicine due to African American attitudes towards condom use. Significant associations were found among those who endorsed conspiracy beliefs and greater intentions as well as more positive attitudes for condom use, suggesting a helpful cultural perspective towards interventions that target conspiracy beliefs within the African American community (Bogart & Bird, 2003).

In addition, African American women are more likely than White women to be associated with conspiracy beliefs and less likely to engage in HIV testing (Bohnert & Latkin, 2009). Sexual coercion is another important factor in considering condom use among African American women. African American women are more likely to experience sexual coercion and lack influence on their sexual partners over sexual practices (Bralock & Koniak-Griffin, 2007). The increased incidence of STDs in this population leads to higher morbidity and mortality rates as compared to the White majority. Furthermore, unintended births are twice as likely among African American college women compared to their White counterparts (James et al., 2008). Similar to White students, African American students have been found to be less motivated to reduce risk behavior, such as not using a condom during vaginal sex. However, African

American men were found to use condoms more when there were fewer perceived barriers (Winfield & Whaley, 2002).

The intersection of gender with cultural factors in African American relationships can explain differences among this subset of the population. For example, in one study black men have been found to be more likely to communicate about condom use non-verbally as opposed to African American women in first time sex; however, both genders lacked communication about HIV status prior to first time sex (Bowleg, Valera, Teti, & Tschann, 2010). Contrarily, African American heterosexual males are thought to be direct about condom use. African American men's cultural beliefs are based on feelings of power associated with the quality of emotional and sexual relationships with partners, with their most strongly endorsed belief being that men provide for their families (Harvey & Bird, 2002). The influencing strategies used to persuade a partner to use a condom during intercourse by African American heterosexual men focus on not getting the partner pregnant and disease prevention. These findings suggest that African American feelings on being a provider for female partners may be linked to engaging in protective sex (Harvey & Bird, 2002). For African American women, gender roles, family and culture are significantly related to factors of relational connectedness, experiences of sexual abuse, and commitment to their church (Jarama, Belgrave, Bradford, Young, & Honnold, 2007).

Latinos and Condom Use

The Latino population contend with unique factors that increase the likelihood of contracting STDs/HIV, such as immigration and living away from an intimate partner, language barriers, psychological distress associated with racism and discrimination and

limited access to health care (Perez-Escamilla, 2010). Latino populations also tend to have lower SES than Whites in the United States and higher rates of unemployment (Marin, 2003; Perez-Escamilla, 2010). The prevalence rate of infection with human immunodeficiency virus (HIV) and other STDs among Latinos is approximately 3.5 times higher than that of Whites (CDC, 2013). This figure is disconcerting since from 2000 to 2010, the Latinos population in the United States increased by more than 15.2 million contributing to half of the total population growth in the country (Ennis, Rios-Vargas, & Albert, 2010). Given the growing rate of this population, the prevalence of STDs is a national health concern.

HIV is the sixth leading cause of death among the Latino community and the already high rates of infection are continuing to increase (CDC, 2010; Kim, De La Rosa, Trepka, Kelley, 2007). The Latino minority is disproportionately affected by other STDs in addition to HIV/AIDS, such as Chlamydia, syphilis and gonorrhea at a rate of 2.7, 2.2 and 2.2 times respectively, more than their non-Latino White counterparts (National Center for Health Statistics (US), 2011). When it comes to condom use, young adolescent and college aged Latinos are half as likely to engage in the practice consistently, compared to their white counterparts (Kim et al., 2007). STI disparities are largest among young Latino men in comparison to non-Latino White counterparts, with a Chlamydia and gonorrhea rate 5.3 times and 4.1 times higher than for White men, respectively (Miller, Ford, Morris, Handcock, Schmitz, Hobbs, & Udry, 2004).

Different factors for Latinas are important in explaining gender differences in the lack of consistent condom use. In the Latina community, fear of confronting their sexual partner about condom use during sexual intercourse and lack of sexual assertiveness play

significant roles in decreasing the actual use of condoms (Crosby Yarber, Sanders, & Graham, 2002). In addition, the sexual partners' attitude towards condom use has a high influence on actual condom use for Latinas. In examining individual predictors of condom use among Latino sexual active participants, partner attitudes about safe sex practices and communication about using condoms were significant predictors of actual condom use among Latinas (DiClemente et al., 2007; Small et al., 2010). Positive attitudes towards safe sex and feeling comfortable discussing safe sex practices increased the likelihood of condom usage among Latinas (DiClemente et al., 2007; Small et al., 2010).

Social Theory, Attitudes, and Condom Use

Since the beginning of the HIV epidemic, researchers have used various theoretical and attitudinal models to explain gender disparities in condom use (see Appendix). Most of these frameworks identify individual level characteristics such as attitudes, knowledge and intentions as risk factors for increasing the likelihood of unsafe sexual behaviors. However, it is also necessary to move beyond individual risk factors and to address social theory and structural/power factors influencing sexual health disparities.

Theory of Reasoned Action and Theory of Planned Behavior

A wide variety of research on condom use in college populations is based on the Theory of Reasoned Action (TRA), which was initially developed by Fishbein and Ajzen (1975) to understand how intent to engage in any behavior is shaped by societal norms as well as one's own perceived attitudes. Therefore, if the behavior is congruent with societal norms and one's attitude is positive about the behavior, it is likely there will be

high intent to engage in the behavior. TRA has been applied various times to predict sexual behavior, such as condom use (Albarracm, Johnson, Fishbein, & Muellerleile, 2001; Muñoz-Silva, Sánchez-García, Nunes, & Martins, 2007). The Theory of Planned Behaviour (TPB) further extends on TRA with the added component of perceived behavioral control, which guides how personal control predicts intent and behavior (Ajzen, 1991).

Muñoz-Silva and colleagues (2007) examined the comparison of the effectiveness for the TRA and TPB models applied to condom use and gender differences in a university sample. Findings suggested that female students have a greater capacity for control and persuasion skills as well as hold more positive attitudes towards condom use, hence, females' intentions to use condoms are more driven by individual factors. Contrarily, males demonstrated more frequent use of condoms and social factors were more predictive of condom use, such as predictors are the subjective norm and the perception of communication and persuasion skills. In regards to both genders, the TPB model significantly increases the percentage of variance explained for condom use intention but not actual condom use behavior over the TRA model (Muñoz-Silva et al., 2007). In addition, attitude, partner norm, and self-efficacy have been evidenced as direct predictors of condom use behavior (Reid & Aiken, 2011). Additionally, TPB has also been more successful at explaining the variance among condom use preparatory behaviors compared to the Health Behavior Model (HBM) in another university study because the TPB interventions evidenced college students to have stronger intentions to use condoms as opposed to the HBM (Montanaro & Bryan, 2014).

Health Belief Model

The HBM is a widely used theory to explain health conditions and health-related behaviors that have also been applied to preventative measures for sexual health (Rosenstock, Strecher, & Becker, 1988). The model is composed of four variables that suggest individuals will take action to prevent illness if they believe they are at risk for contracting HIV (perceived susceptibility), if they believe HIV will lead to potentially serious consequences such as AIDS and death (perceived severity), if they believe that a course of action available to them will be beneficial in reducing either their susceptibility to or the severity of the condition such as condoms preventing contraction of HIV (perceived benefits), and if they believe that the costs of using condoms do not outweigh the benefits of using condoms (perceived barriers) (Rosenstock et al., 1988). However, the constructs measured to produce change may differ from constructs used by the HBM to explain perceived susceptibility to HIV/AIDS.

The HBM builds a framework upon factors such as perceived susceptibility to health risks, such as STDs and HIV, and severity of threat to motivate behavior; however, traditional HBM is not as influential in condom use behavior, but has been found to be significant in terms of perceived benefits and barriers (Montanaro & Bryan, 2014). The HBM has been modified to explain HIV risk behaviors such as in the women's vulnerability paradigm (Higgins et al., 2010). Similarly, the Information-Motivation-Behavioral Skills Model (IMB) incorporates how knowledge of STD and HIV health consequences is partially a mediator and activator of condom use behavioral skills that drive motivation and attitudes for condom use behavior (Fisher & Fisher, 1992).

Self-Efficacy Theory

Bandura (1990) explained that his Self-Efficacy (SE) Theory could be used as a model to prevent transmission of HIV/AIDS rooted in a social-cognitive perspective. SE posits that the belief in one's ability to perform a behavior will result in a solution to a problem. SE has been successfully applied to many unhealthy behaviors, such as smoking and alcohol abuse, as well as being developed as a comprehensive model explaining the relationship between condom use self-efficacy and condom use (Wulfert & Wan, 1993).

Condom use has been operationalized as self-reported sexual behaviors with condoms divided by the sum total of sexual behaviors, with higher scores indicating greater condom use (Zamboni, Crawford, & Williams, 2000). In other studies measuring condom use, students indicated if they had sexual contact in the last month and rated their condom use for those encounters on a 5-point scale from "never" to "always" (American College Health Association, 2010; Zodda, 2015). Findings across studies indicate condom use depends on condom use self-efficacy or suggest that self-efficacy is a strong predictor of condom use (Barkley & Burns, 2000; French & Holland, 2013; Nesoff, Dunkle & Lang, 2016; Snead et al., 2014; Wulfert & Wan, 1993). Although most studies in the literature reviewed found a strong relationship between condom use self-efficacy and condom use, at least one study found no significant relationship between the two among college students (Baker, Rodgers, Davis, Gracely, & Bowleg, 2014). This may be due to a mediating relationship found between condom influence strategies, condom use self-efficacy and condom use, when strategies acting as the mediating variable as explained within another study among college students (French & Holland, 2013).

Conflicting results have been found in the literature describing the relationship between attitude related constructs (sexual attitudes, condom use expectancies, peer group comparison and AIDS knowledge) and actual condom use behaviors. Some studies have found a direct link (Fisher, Byrne, Edmunds, Miller, Kelley, & White, 1979); others have found no significant relationship (Baffi, Schroeder, Redican, & McCluskey, 1989). These results are consistent with Wulfert and Wan's model, with self-efficacy mediating the relationship between attitude related constructs and condom use and explaining most of the variance in condom use, along with peer group comparisons (Wulfert & Wan, 1993). The results from the Wulfert and Wan study asserted self-efficacy as a central mediator between cognitive factors, expectancies, attitudes and condom use. This study however, did not examine sexual assertiveness as it relates to self-efficacy and condom use.

Attachment Theory

Research by Hazan and Shaver (1987) extended Attachment Theory to explain the formation of underlying interpersonal dynamics affecting adult romantic attachments, such as development of healthy and unhealthy love as well as understand intimacy, trust, jealousy and other emotions, to enhance understanding of specific circumstances within the relationship. Attachment styles are defined as: secure (i.e., feeling worthy of love), anxious (i.e., easily in and out of love with difficulty finding true love), and avoidant (i.e., do not need love) and are linked to working models of self and other. For example, working models affect attachment styles as follows: secure attachment identifies a positive working model of self due to individuals having a good self-image and a positive working model of the other, as reflected by individuals' tendency to view others as

benevolent and supportive; whereas, an anxious attachment style is linked to a negative model of the self with a positive model of the other and an avoidant attachment style represents a positive model of the self and negative model of the other (Bartholomew & Horowitz, 1991). One study on college students explored the effects of attachment priming to condom use attitudes, result indicated that men preferred not to use condoms (Strachman & Impett, 2009). People who employ anxious attachment styles have been found to prefer not to use condoms, whereas those with avoidant attachment styles endorsed preferences that increased their likelihood to use condoms (Strachman & Impett, 2009). In another study employing experimental methods, condom use was framed as a benevolent act and participants were primed by an attachment style condition. This resulted in the positive attitude for the other was congruent with the preference to not use condoms by those primed by a secure and anxiety styles in contrast to those primed by the avoidance style (Sakaluk & Gillath, 2014).

Transtheoretical Model

The Transtheoretical Model (TTM) is an integrative, behavioral change theory that has been applied to safe sex behaviors and incorporates three processes for engaging in safe sex: stages of change, decisional balance, and self-efficacy (Prochaska, DiClemente, & Norcross, 1992). Similar to TRA, this model also posits one of the most important factors influencing condom use behavior, the intention to use a condom (Prochaska & Velicer, 1997). TTM differs from other models due to the progress through behavioral change represented in the 5 stages of change: precontemplation stage (no intention), the contemplation stage (intending to change), the preparation stage (actively planning to change), the action stage (overtly making changes for less than 6 months),

and the maintenance stage (maintaining change for more than 6 months). In one study examining late-adolescent, heterosexual men from an undergraduate sample, there was strong support for TTM to be applied to condom use given the variables of identifying positive aspects of condom use, feelings of efficacy to use condoms and readiness for change all associated with condom use (Noar et al., 2001). Implications of TTM determine a number of advantages and disadvantages based on differences in stages of change in college students (Tung, W. C., Farmer, Ding, Tung, W. K., & Hsu, 2009). The TTM has also been found to be reliable and predictive in an ethnically diverse group of women (Gazabon, Morokoff, Harlow, Ward, & Quina, 2007). In another college study on TTM and condom use, advantages and disadvantages predicted consistent condom use for female students, while only the advantages (i.e., safety) were predictive of consistent condom use in male students (Prat, Planes, Gras, & Sullman, 2015).

Protection Motivation Theory

Protection Motivation Theory (PMT) (Rogers, 1983) has been used to explain condom use in multiple studies (Boer & Mashamba, 2005; Tanner, Day, & Crask, 1989). This theory as it is applied to condom use postulates that threatening health information, such as information about STDs, will evoke two mediating cognitive processes, cognitive threat appraisal and coping appraisal, which in turn will affect condom use behaviors. Threat appraisal refers to the individual's evaluation of the effectiveness of various responses to threat as well as personal ability to carry out the right response. It also refers to evaluation of perceived reward in the environment, compared to the threat involved in attaining the reward (Rippetoe & Rogers, 1987; Sheeran & Orbell, 1998; Zhang, 2004). Coping appraisal refers to adaptive (using condoms and intending to use condoms) versus

maladaptive coping (avoiding the use of condoms) in response to the threat, stemming from subjective feelings that stem from the threat appraisal process (Rippetoe & Rogers, 1987; Sheeran & Orbell, 1998).

Study findings indicate that with increased threat appraisal, including vulnerability and severity, there is an increased adaptive response, leading to increased condom use (Rogers & Prentice-Dunn, 1997). Unfortunately, the population that is most at risk for STDs has low threat appraisal, leading to inconsistent condom use. Findings from studies using college samples indicated that the majority of college students engaged in unprotected sex at least some of the time, yet the perceived risk for contracting an STD, including HIV, was low (Pascarelli, 2005; Zhang et al., 2004). Ostensibly, there is a difference between American college students and college students in other nations. Findings from one study using a Chinese college sample suggest that these students are experiencing a conflict between abstaining from sexual encounters in accordance with traditional values and mimicking the sexual behavior of their Western counterparts (Zhang, Stanton, Li, Mao, Sun, Kaljee, & Qu, 2004). Chinese college students demonstrate high threat appraisal with sex as well as carrying condoms and perceive a low level of vulnerability to STDs (Wong & Tang, 2001; Zhang et al., 2004).

Theory of Gender and Power

The Theory of Gender and Power (TGP) examines gender imbalances at the structural and societal level through three sexual perspectives: the division of labor (i.e. unequal pay and gender-based stereotypes), division of power (i.e., authority and influence in social relations), and cathexis (i.e., social norms and emotional attachments) (Connell, 1987). Wingood and DiClemente (2000) adapted TPG to conceptualize the

sexual division of power and condom use among heterosexual women. Wingood and DiClemente (2000) defined power by one's ability to act in or change a given circumstance and to have power over another. They proposed that as the power inequity between men and women increases, women could experience an increase in adverse health outcomes. In applying this theory to sexual behavior, they further proposed that when a woman lacks the power to act in a way that is beneficial to her health during sexual intercourse with a man, unsafe sexual behavior is more likely to occur (DePadilla, Elifson, & Sterk, 2012). Furthermore, this dynamic is more prominent in longer term relationships where women are even less likely to assert condom use, and among women that feel the need to play a submissive role in their sexual relationship with a man (Wingood & DiClemente, 2000; Sanders-Philips, 2002), or among women with a drug-using partner, especially a steady partner (DePadilla et al., 2012).

Related to the TPG, The Multifaceted Model of HIV Risk (MMOHR) contends that sexual victimization of women contributes as a predictor to sexual risk behaviors when mediated by sexual assertiveness in women (Morokoff et al., 2009). Results accounted for an effect of gender explaining 13.4% of variance for dependent variables of depression, and childhood sexual abuse, which is greater in women than men. The model applies to both men and women.

Attitudes Toward Condom Use

Attitude towards condoms is an influential factor that can motivate intent to use condoms and it is central component within the application of the Theory of Reasoned Action to condom use (Albarracin et al., 2001). A common theme consistent in the literature on condom use behavior is that attitude is identified as a direct and significant

determinant of condom use (Albarracin et al., 2001; Beckman, 1996). For example, young adults have been found to be 1.37 times more likely to use a condom when he or she has a positive attitude towards using a condom (Small et al., 2010). However, college students have expressed less favorable attitudes towards condoms due to problems when using condoms, such as discomfort, sensation loss, and erection loss (Crosby et al., 2005), breakage and slippage (Reece, Herbenick, Monohan, Temkit, & Yarber, 2008), and decreased sexual pleasure (Beckman, 1996; Conley & Collins, 2005). These problems lead to negative attitudes about condoms, which in turn can lower the intention to use condoms (Albarracin et al., 2001).

It is important to assess college students' attitudes towards condoms to understand gender-specific barriers. A reliable and psychometrically sound measure of attitudes towards condoms is the Brief Condom Attitudes Scale, which indicated differences in gender in college student condom use. Women tended to perceive condoms as less protective and men perceived condoms as more interruptive while reporting attitudes for engaging in condom use during sexual intercourse (Hill, Amick, & Sanders, 2011). In another study, ethnic disparities were more apparent than gender disparities for condom use attitudes (Beckman, Harvey, & Tiersky, 1996). Attitudes about condom use in this study was measured by the agreement subscale from the Contraceptive Attributes Questionnaire-2 (Beckman, Harvey & Murray, 1992), which examines attitudes based on perception that the condom is acceptable to peers, convenient, not embarrassing to use or discuss with a partner, does not interfere with sexual enjoyment, and is not associated with health concerns. In relation to ethnic disparities, African American college students were more favorable to prior and intended condom use than their white counterparts.

Furthermore, condom use was thought to not interfere with sexual pleasure, leading to African American students to be more likely to engage in condom use based on attitudes towards condoms (Beckman et al., 1996). Lastly, Sacco and his colleagues (1993) suggest college women are more likely to have favorable attitudes towards condom use than college men, except for their attitudes about personally purchasing and possessing condoms.

As previously mentioned, attitudes about condoms are complicated for women when they are in an emotional relationship (Alvarez & Garcia-Marques, 2011; Fehr et al., 2015; Lehmillier et al., 2014). In a study among heterosexual college men and women, Hynie and colleagues (1998) examined stereotyped interaction patterns, called scripts, and internalized social norms in respect to perceived relational attitudes of an open-ended story about a dating couple, which participants were asked to complete in the experiment. The outcome of the study indicated women were more likely than men to attribute relational scripts tied to emotion and both men and women were reluctant to incorporate condom use behavior into their response, suggesting the explanation that women have internalized social norms to a greater extent than did men (Hynie et al., 1998). Also, their findings revealed no difference in gender when it came to non-condom use and relational scripts, which can be explained by those that endorsed relational scripts also possess attitudes that are less favorable for condom use behavior in a more emotionally driven relationship (Hynie et al., 1998). This helps justify why oral contraceptives are more common when in a monogamous relationship given that the literature supports attitudes about condom use behavior shift for both genders when intercourse is within the parameters of a serious and emotional relationship (Flood, 2003).

Socioeconomic Stratification

Diseases of all kinds are more prevalent among lower-income populations than higher income populations (CDC, 2015). Sexually transmitted diseases are not only far more prevalent among lower income minorities but are also rising in these populations (CDC, 2009). Socioeconomic status appears to be a more critical variable than ethnicity to consider in the spread of STDs (CDC, 2015; Norris & Ford, 1995). Lower household wealth, lower individual economic status (earned income, access to food and other material resources) and educational status have been strongly associated with inconsistent condom use (Davidoff-Gore, Luke, & Wawire, 2011). This is different from not using condoms in general, however it is still associated with increased likelihood of contracting STDs. No significant differences were found in these associations by gender, with the exception of food insufficiency, which increased the risk of inconsistent condom use for young women but not for young men (Allen, Simon, Edwards, Simeon, 2010; Davidoff-Gore et al., 2011; Weiser et al., 2010). Findings from another study contradicted previous results by revealing that individual SES and neighborhood SES are not related to condom use in an African-American sample (Sionean & Zimmerman, 1999).

Results from studies that illuminate the relationship between SES and condom usage highlight the importance of poverty in shaping sexual behavior. Specifically, increasing individual access to resources, providing educational and work opportunities could prove to be effective strategies for decreasing the transmission of STDs/STIs (Allen et al., 2010; Davidoff-Gore et al., 2011; Weiser et al., 2010).

Relationship Power and Sexual Assertiveness

According to past literature, sexual assertiveness is a common theme that predicts increased condom use in young adults, especially through empowerment of women in relationships where they perceive themselves to have low power and increasing their sexual assertiveness (Fehr et al., 2015; Woolf & Maistro, 2008). Sexual assertiveness is an important factor influencing sexual autonomy and condom use among women (Jones, 2011). Sexual assertiveness relates to women's perception of their own power in a sexual relationship (Jones, 2011; Zerubavel & Messman-Moore, 2013). Sexual assertiveness has been defined in different ways in the research literature. DiClemente and Wingood (1995) defined it as the act of demanding the male partner uses a condom while Zamboni and colleagues (2000) defined it as a person's freedom of sexual expression, in terms of beliefs, desires, feelings and intentions in a sexual context. Additionally, Morokoff et al. (1997) defined sexual assertiveness as preservation strategies during the initiation of wanted sexual events, refusal of unwanted sex, and protection against unwanted pregnancy and STDs.

Within a study of participants of female college students, body esteem, as defined as the positive feelings about one's own body is based on satisfaction with one's appearance, weight, and sexual attractiveness, was associated with women's ability to insist upon male partners to use condoms during intercourse (Auslander, Baker, & Short, 2012). These findings suggest that considering the women's self-image of one's body important when providing interventions for increasing condom use. Another factor implicated in sexual assertiveness on condom use is the impact of sexual abuse. Research has indicated greater childhood sexual abuse is significantly associated with less sexual

assertiveness when it comes to condom use in women and adult sexual victimization is significantly associated with greater sexual assertiveness in condom use in both men and women, yet no gender differences were found in sexual assertiveness and condom use (Morokoff et al., 2009).

Negotiating condom use is highlighted in the literature as a form of sexual assertiveness. In one study, logistic regression analyses revealed that communication with sexual partners about condom use strengthened practice of condom use (Small et al., 2010). Another study among college students suggests women can be very assertive when using the condom negotiation strategy of withholding sex and it is significantly associated with increased condom use for only women (French & Holland, 2013). Research suggests heterosexual college female students are more active and perceive low risk when it comes to negotiating condom use, whereas their male counterparts are more reactive in their communication and will forgo condoms most often due to inconvenience (Carter et al., 1999). However, findings of one study show that 20% of young women participants endorse the belief that they do not perceive that ability to refuse unwanted sex or ask their partner if he has been tested for HIV and other STDs, which supports need for improved intervention efforts at targeting this high-risk population (Rickert, Sanghvi, & Wiemann, 2002).

Intervention Models

In discussing intervention models, following authors in previous studies, the efficacy of an intervention is defined as the reduction in risk associated with implementation of an intervention and relies on the intrinsic properties of the intervention, while the effectiveness of an intervention is defined as the reduction in risk

as implemented and relies more on contextual or environmental factors (IOM, 2008; Steckler & McLeroy, 2008). Some interventions differ in terms of efficacy versus effectiveness and the gap is related to the socioenvironmental gap between artificially constructed circumstances and naturally occurring social environments.

Biomedical Interventions

Biomedical interventions known as chemoprophylaxis, such as antiretroviral therapy, focus on the afflicted individual and biological mechanisms of disease (Clarke, Shim, Mamo, Fosket, & Fishman, 2003). Most funding allocated towards HIV/AIDS prevention strategies goes towards chemoprophylaxis, especially due to the promising results. However, some caveats concerning biomedical interventions include the development of resistant viral strains, the increase in risky sexual practices and the decreased efficacy in preventing the sexual transmission of disease compared to using condoms (Cohen, 2011; Eaton & Kalichman, 2007; McGowan, 2010). In contrast to the biomedical intervention model, public health interventions focused on the health of populations and influencing policy change to foster change on the societal level (Roberts & Mathews, 2012; Waitzkin, 2007).

However, biomedical thinking has influenced public health interventions, and the focus has shifted to individual risk factors and individual outcomes within populations (Roberts & Mathews, 2012). One public health intervention that focuses on the individual is the emerging goal of autonomy and providing individual opportunities to improve their own health by gaining knowledge (Munthe, Sandman, & Cutas, 2012). Another focus of public health interventions has been equality among individual access to opportunities to

improve health and respecting the choice of failing to take advantage of such opportunities (Munthe et al., 2012).

Behavioral Interventions

Behavioral interventions target initiating and maintaining behavior change with a focus on individual agency (Hemmige, McFadden, Cook, Tang, Schneider, 2012). Most include a didactic component, which by itself does not cause meaningful change, while others include an interactive component, 1-1 sessions, health worker delivered, parent delivered, group sessions and skills groups (Hemmige et al., 2012; Jemmott, Jemmott, & Fong, 1992). Intervention efforts have targeted increasing sexual assertiveness, particularly for survivors of adult sexual victimization and survivors of childhood sexual abuse, as well as tailoring to differences in women and men, such as screening men for depression (Morokoff et al., 2009).

Sexual risk behavior has been a challenge to change for decades. There is a need for effective and culturally competent interventions to address minority groups that are at high risk for contracting HIV. Skills-based interventions are very effective among young adults, such as African Americans and focus on negotiating condom usage and condom application (in teen groups) (Hemmige et al., 2012; Jemmott et al., 1992). Interventions specifically for African American students include the skills-based classes, telephone reminder calls for safe sex, interactive video interventions and discussions specific to African American identified development and sexuality. These interventions were significantly effective at increasing condom use (DiClemente et al., 2004). Intervention strategies specifically for women had to do with cultural targeting and explicit skill

instruction, condom negotiation strategies, and empowerment based teaching (Raj et al., 2001; Winfield & Whaley, 2002).

Intervention strategies specifically for men focusing on safe-sex behaviors were effective at increasing condom use (Hemmige, 2012). Interventions focusing on positive aspects of condom use were more successful at increasing condom use as opposed to trying to change negative aspects of condom use (Noar et al., 2001; Prat et al., 2015). Nonverbal communication was also more prominent in men and interventions targeting the nonverbal context of behavior are also suggested in research (Exner et al, 1999). Interventions geared towards heterosexual African Americans were most effective when they included skill-based and peer-based education programs, which were culturally tailored (Darbes, Crepaz, Lyles, Kennedy, & Rutherford, 2008). Overall, HIV prevention programs for college students may be improved if they include readiness to change and perceived benefits and barriers (Tung et al., 2009).

To date, prevention efforts to reduce the transmission of HIV/AIDS are primarily aimed at decision-making within the individual's control (Cohen, 2011; Eaton & Kalichman, 2007; Krishnan et al., 2008; McGowan, 2010). Intervention at the economic level can inspire men and women alike to engage in more educational and employment opportunities because poverty is a pivotal risk factor associated with increase transmission rates of HIV/AIDS (Krishnan et al., 2008). Reid and Aiken (2011) provided an integrated psychosocial model to develop a more comprehensive approach to intervention methods for young women. Integrative models are more promising because they recognize individual agency yet see individual choice as a function of structural constraints. Structural interventions are meant to create a structure around the afflicted

person that would benefit them once they engage in it, while behavioral interventions focus on helping the individual make more advantageous decisions. When both are included in the intervention model, the effectiveness of the overall intervention increases (Rotheram-Borus, Swendeman, & Chovnick, 2009).

CHAPTER 3

CONCLUSION

Summary of Findings and Implications for Future Research

Adolescents and young adults account for approximately half of all new STD infections in the United States. Ethnic minorities are disproportionately affected, with African Americans showing the highest rates of STDs (CDC, 2011). Condom use is the most effective prevention measure according to the CDC, however condom use in the U.S. is dangerously low or inconsistent. Several factors influencing condom use differ by gender and ethnicity. Theoretical models in the last four decades have been developed to help structure and explain factors related to condom use.

Multiple factors predicting condom use are similar between gender and ethnicity. Attachment type, self-efficacy and attitudes towards condom use all affect condom use in male and female samples (Albarracin et al., 2001; Strachman & Impett, 2009; Wulfert & Wan, 1993). Safe sex practices for women are related to perceived relationship satisfaction, power and sexual assertiveness (Strachman & Impett, 2009). Greater relationship satisfaction is associated with decreased condom use, as is lack of sexual assertiveness and power in relationships (Fehr, Vidourek, & King, 2015). Following the vulnerability paradigm, interventions should aim at increasing power and sexual assertiveness for women in order to increase condom usage (Higgins et al., 2010). Alternatively, men contend with other barriers to condom use such as perceiving less

enjoyment in using condoms (Carter et al., 1999; Shearer et al., 2005), viewing women as less desirable when they provided condoms (Young et al., 2010) and having a history of child sexual abuse (Dilorio et al., 2002).

In addition to the aforementioned factors, African-American men and women are influenced more by attitudes towards condom use and beliefs about African American genocide by using condoms (James et al., 2008). African American women are also more frequently coerced into unsafe sex in comparison to White counterparts and lack power and influence on their partners (Bralock & Kroniak-Griffin, 2007). Socioeconomic status has also been linked to condom use, with low SES relating to decreased condom use among minorities (CDC, 2010). Latino condom use is influenced by their SES as well as psychological distress related to immigration and living away from intimate partners (DiClemente et al., 2007).

One of the first theoretical models developed to explain condom usage was the Theory of Reasoned Action (Fishbein, & Ajzen, 1975), which postulates the intent to engage in safe sex practice is heavily influenced by societal norms and attitudes. This theory appears to be more relevant to males compared to females. The Theory of Planned Behavior better-explained condom use (Munoz-Silva et al., 2007). Another earlier model was the Health Belief Model that highlighted the perceived susceptibility to risk factors and severity of the threat of STDs to explain engagement in safe sex practices among college students (Rosenstock et al., 1988). Bandura's (1990) Self-Efficacy Theory helped explain more of the variance in condom usage (Wulfert & Wan, 1993), as did the Protection Motivation Theory by including the constructs threat appraisal and coping appraisal. According to the PMT, increased threat appraisal combined with adaptive

coping leads to increased condom use (Rogers, 1983). The Transtheoretical Model integrates the approach to behavioral change by guiding increasing condom use is predictive by increasing self-efficacy, stages of change and positive intentions for safe sex in decision making skills (Prochaska & Velicer, 1997). Finally, Wingood and DiClemente (2000) applied the Theory of Gender and Power to explain how instituting change is beyond the individual and extends to gender roles and societal norms that influence power differentials within sexual relationships among heterosexual couples that can lead to lack of condom use, specifically lack of condom use in women.

It is a public health priority to modify existing intervention models to fit the overarching themes of attitudes, socioeconomic stratification as well as sexual power and sexual assertiveness that are represented by the literature to influence condom use in the college population. Knowledge alone may not be sufficient to change sexual behaviors; hence, considering the differences in gender plays a crucial role in preventing unprotected sex and tailoring interventions specific to the college population. A disadvantage of a majority of research available within the literature is that the heavy reliance upon self-report data limits findings (Reid & Aiken, 2011). Additionally, certain models are more general and may not target specific groups (i.e. gay men or minorities) (Wulfurt & Wan, 1993). Ethnic groups, particularly African American and Latino students, are statistically at a greater risk; however, race in itself is not a risk factor, but it is strongly associated with social, economic, and culture implications as heightened risk factor.

The young men and women that make up the college student population are a vulnerable population as they are at risk for contracting HIV and STDs. Gender and

cultural factors are very important, particularly with respect to barriers to engaging in condom use behaviors and other STD/HIV prevention strategies. Expanding research for potential influences that motivate risk-taking behaviors could be extended to evaluating new avenues related to gender and the structural barriers that may pose a lack of consideration to avoid acquisition of HIV/AIDS or other STDs in a college sample. Further examination into this subset of the population would be beneficial at determining if features of this group are vulnerable to HIV and STD risk related behaviors based relationship dynamics such as sexual assertiveness and condom use self-efficacy.

APPENDIX

THEORIES/MODELS APPLIED TO CONDOM USE

Theory/Model	Theorist Who Applied Theory/Model to Condom Use	Year
Theory of Reasoned Action (TRA)	Fishbein & Ajzen	1975
The Health Belief Model (HBM)	Rosenstock, Strecher, & Becker	1988
Information-Motivation-Behavioral Skills Model (IMB)	Fisher & Fisher	1992
Self-Efficacy (SE) Theory	Bandura	1990
Attachment Theory	Hazan & Shaver	1987
Transtheoretical Model (TTM)	Prochaska, DiClemente, & Norcross	1992
Protection Motivation Theory (PMT)	Rogers	1983
Theory of Gender and Power (TGP)	Wingood & DiClemente	2000
The Multifaceted Model of HIV Risk (MMOHR)	Harlow, Quina, Morokoff, Burkholder, & Deiter	1993

REFERENCES

- Allen, C. F., Simon, Y., Edwards, J., & Simeon, D. T. (2010). Factors associated with condom use: Economic security and positive prevention among people living with HIV/AIDS in the Caribbean. *AIDS Care*, *22*, 1386-1394. doi:10.1080/09540121003720978
- Albarracin, D., Johnson, B. T., Fishbein, M., & Muellerleile, P. A. (2001). Theories of Reasoned Action and Planned Behavior as models of condom use: A meta-analysis. *Psychological Bulletin*, *127*, 147-161.
- Alvarez, M. J., & Garcia-Marques, L. (2011). Cognitive and contextual variables in sexual partner and relationship perception. *Archives of Sexual Behavior*, *40*, 407–417.
- Amaro, H. (1995). Love, sex, and power: Considering women's realities in HIV prevention. *American Psychologist*, *50*, 437-447.
- ACHA (American College Health Association). (2015). *American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2015*. Hanover, MD: American College Health Association. Retrieved from: http://www.achancha.org/docs/nchahi_web_spring_2015_reference_group_executive_summary.pdf
- Anderson, J. E. (2003). Condom use and HIV risk among us adults. *American Journal of Public Health*, *93*, 912-914.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469-480.
- Auslander, B. A., Baker, J., & Short, M. B. (2012). The connection between young women's body esteem and sexual assertiveness. *Journal of Pediatric and Adolescent Gynecology*, *25*, 127-130.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*, 179–211. doi:10.1016/0749-5978(91)90020-T
- Bailey, J. A., Haggerty, K. P., White, H. R., & Catalano, R F. (2011). Associations between changing developmental contexts and risky sexual behavior in the two years following high school. *Archives of Sexual Behavior*, *40*, 951–960. doi:10.1007/s10508-010-9633-0

- Baker, J. L., Rodgers, C. R. R., Davis, Z. M., Gracely, E., & Bowleg, L. (2014). Results from a secondary data analysis regarding satisfaction with health care among African American women living with HIV/AIDS. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 43*, 664-676.
- Baffi, C. R., Schroeder, K. K., Redican, K. J., & McCluskey, L. (1989). Factors influencing selected heterosexual male college students' condom use. *Journal of American College Health, 38*, 137-141.
- Bandura, A. (1990). Perceived self-efficacy in the exercise of control over AIDS infection. *Evaluation and Program Planning, 13*, 9-17.
- Barkley, T. W., & Burns, J. L. (2000). Factor analysis of the condom use self-efficacy scale among multicultural college students. *Health Education Research, 15*, 485-489.
- Beckman, L. J., Harvey, S. M., & Tiersky, L. A. (1996). Attitudes about condoms and condom use among college students. *Journal of American College Health, 44*, 243-250.
- Beckman, L. J., Harvey, S. M., & Murray, J. (1992). Dimensions of the contraceptive attributes questionnaire. *Psychology of Women Quarterly, 16*, 243-259.
- Bralock, A. R., & Koniak-Griffin, D. (2007). Relationship, power, and other influences on self-protective sexual behaviors of African American female adolescents. *Health Care for Women International, 28*, 247-267.
- Bohnert, A. S., & Latkin, C. A. (2009). HIV testing and conspiracy beliefs regarding the origins of HIV among African Americans. *AIDS Patient Care and STDs, 23*, 759-763.
- Bogart, L. M., & Bird, S. T. (2003). Exploring the relationship of conspiracy beliefs about HIV/AIDS to sexual behaviors and attitudes among African-American adults. *Journal of the National Medical Association, 95*, 1057-1065.
- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.
- Boer, H., & Mashamba, M. T. (2005). Psychosocial correlates of HIV protection motivation among black adolescents in Venda, South Africa. *AIDS Education and Prevention, 17*, 590-602.
- Bowleg, L., Valera, P., Teti, M., & Tschann, J. M. (2010). Silences, gestures, and words: Nonverbal and verbal communication about HIV/AIDS and condom use in Black heterosexual relationships. *Health Communication, 25*, 80-90.

- Buhi, E. R., Marhefka, S. L., & Hoban, M. T. (2010). The state of the union: Sexual health disparities in a national sample of US college students. *Journal of American College Health, 58*, 337-346.
- Carter, J. A., McNair, L. D., Corbin, W. R., & Williams, M. (1999). Gender differences related to heterosexual condom use: The influence of negotiation styles. *Journal of Sex and Marital Therapy, 25*, 217-225.
- Camilleri, M., Kohut, T., & Fisher, W. (2015). Condom use behavioural skills mediate the relationship between condom use motivation and condom use behaviour among young adult heterosexual males: An information-motivation behavioural skills analysis. *The Canadian Journal of Human Sexuality, 24*, 131.
- Campbell, C. A. (1995). Male gender roles and sexuality: Implications for women's AIDS risk and prevention. *Social Science & Medicine, 41*, 197-210.
- Carvalho, T., Alvarez, M. J., Barz, M., & Schwarzer, R. (2015). Preparatory behavior for condom use among heterosexual young men: A longitudinal mediation model. *Health Education & Behavior, 42*, 92-99.
- Centers for Disease Control and Prevention. (2008). *Sexually transmitted disease surveillance, 2007*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention.
- Centers for Disease Control and Prevention. (2010) Establishing a holistic framework to reduce inequalities in HIV, Viral Hepatitis, STDs, and Tuberculosis in the United States, Atlanta, GA: U.S. Department of Health and Human Services, Center for Disease Control and Prevention.
- Centers for Disease Control and Prevention. (2011). *HIV among youth*. Retrieved from: <http://www.cdc.gov/hiv/risk/age/youth/index.html>
- Centers for Disease Control and Prevention. (2013). *Condoms and STDS: Fact sheet for public health personnel*. Retrieved from: <http://www.cdc.gov/condomeffectiveness/latex.htm>.
- Centers for Disease Control and Prevention. (2014). *HIV/AIDS surveillance report: Vol. 26*. Atlanta, GA: Centers for Disease Control.
- Centers for Disease Control and Prevention. (2015). *Male latex condoms and sexually transmitted diseases*. Retrieved from: <http://www.cdc.gov/condomeffectiveness/latex.htm>.
- Civic, D. (2000). College students' reasons for nonuse of condoms within dating relationships. *Journal of Sex and Marital Therapy, 26*, 95-105.

- Clarke, A. E., Shim, J. K., Mamo, L., Fosket, J. R., & Fishman, J. R. (2010). A Theoretical and Substantive Introduction. *Biomedicalization: Technoscience, health, and illness in the US*, 1-44.
- Cohen, J. (2011). HIV treatment as prevention. *Science*, 334, 1628.
- Conley, T., & Collins B. (2005). Differences between condom users and condom nonusers in their multidimensional condom attitudes. *Journal of Applied Social Psychology*, 35, 603–20. doi:10.1111/j.1559-1816.2005.tb02137.x
- Connell, R. (1987). *Gender and power*. Stanford, CA: Stanford University Press.
- Crosby, R., Yarber, W. L., Sanders, S. A., & Graham, C. A. (2005). Condom discomfort and associated problems with their use among University students. *American Journal College Health*, 54, 143–7. doi:10.3200/JACH.54.3.143-148
- Darbes, L., Crepaz, N., Lyles, C., Kennedy, G., & Rutherford, G. (2008). The efficacy of behavioral interventions in reducing HIV risk behaviors and incident sexually transmitted diseases in heterosexual African Americans. *AIDS*, 22, 1177-94.
- Davidoff-Gore, A., Luke, N., & Wawire, S. (2011). Dimensions of poverty and inconsistent condom use among youth in urban Kenya. *AIDS Care*, 23, 1282-1290.
- DePadilla, L., Elifson, K. W., & Sterk, C. E. (2012). Beyond sexual partnerships: the lack of condom use during vaginal sex with steady partners. *International Public Health Journal*, 4, 435.
- DiClemente, R. J., Wingood, G. M., Harrington, K. F., Lang, D. L., Davies, S. L., Hook, E. L., Oh, M. W., Crosby, R. A., Hertzberg, V. S., Gordon, A. B., & Hardin, J. W. (2004). Efficacy of an HIV prevention intervention for African American adolescent girls: A randomized controlled trial. *Jama*, 292, 171-9.
- Dilorio, C., Hartwell, T., & Hansen, N. (2002). Childhood sexual abuse and risk behaviors among men at high risk for HIV infection. *American Journal of Public Health*, 92, 214-219.
- Eaton, L. A., & Kalichman, S. C. (2007). Risk compensation in HIV prevention: Implications for vaccines, microbicides, and other biomedical HIV prevention technologies, *Current HIV/AIDS Reports*, 4, 165–172.
- Ennis, S. R., Rios-Vargas, M., & Albert, N. G. (2010). Census Briefs. *US Census Bureau*.
- Exner, T. M., Gardos, P. S., Seal, D. W., & Ehrhardt, A. A. (1999). HIV sexual risk reduction interventions with heterosexual men: The forgotten group. *AIDS and Behavior*, 3, 347-358

- Fehr, S. K., Vidourek, R. A., & King, K. A. (2015). Intra- and inter-personal barriers to condom use among college students: A review of the literature. *Sexuality and Culture, 19*, 103-121. doi: 10.1007/s12119-014-9249-y.
- Fisher, W. A., Byrne, D., Edmunds, M., Miller, C. T., Kelley, K., & White, L. A. (1979). Psychological and situation- specific correlates of contraceptive behavior among university women. *Journal of Sex Research, 15*, 38-55.
- Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin, 111*, 455- 474.
- Fishbein, M., & Ajzen, I. (1975). *Belief attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley.
- Flood, M. (2003). Lust, trust and latex: Why young heterosexual men do not use condoms. *Culture, Health & Sexuality, 5*, 353-369.
- Frankel, A., & Curtis, D. A.(2008). What's in a purse? Maybe a woman's reputation. *Sex Roles, 59*, 615-622. doi:10.1007/s11199-008-9463-x.
- French, S. E., & Holland, K. J. (2013). Condom negotiation strategies as a mediator of the relationship between self-efficacy and condom use. *Journal of Sex Research, 50*, 48-59.
- Gazabon, S. A., Morokoff, P. J., Harlow, L. L., Ward, R. M., & Quina, K. (2007). Applying the Transtheoretical Model to ethnically diverse women at risk for HIV. *Health Education & Behavior, 34*, 297-314.
- Gullette, D. L., & Lyons, M. A. (2006). Sensation seeking, self-esteem, and unprotected sex in college students. *Journal of the Association of Nurses in AIDS Care, 17*, 23-31.
- Harvey, S. M., & Bird, S. T. (2002). Power in relationships and influencing strategies for condom use: Exploring cultural beliefs among African American men. *International Quarterly of Community Health Education, 21*, 147-162.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality & Social Psychology, 52*, 511–524.
- Hemmige, V., McFadden, R., Cook, S., Tang, H., & Schneider, J. A. (2012). HIV prevention interventions to reduce racial disparities in the United States: A systematic review. *Journal of General Internal Medicine, 27*, 1047-1067. doi: 10.1007/s11606-012-2036-2.
- Hill, B. J., Amick, E. E., & Sanders, S. A. (2011). Condoms and US college-aged men and women: Briefly assessing attitudes toward condoms and general condom use behaviours. *Sexual Health, 8*, 372-377.

- Higgins, J. A., Hoffman, S., & Dworkin, S. L. (2010). Rethinking gender: Heterosexual men, and women's vulnerability to HIV/AIDS. *American Journal of Public Health, 100*, 435-45.
- IOM (Institute of Medicine). (2008). *Methodological challenges in biomedical HIV prevention trials*. Washington, DC: The National Academies Press.
- Hynie, M. , Lydon, J. E., Côté, S. , & Wiener, S. (1998). Relational sexual scripts and women's condom use: The importance of internalized norms. *Journal of Sex Research, 35*, 370-380.
- James, A., Simpson, T., Chamberlain, W. (2008). Chlamydia prevalence among college students: Reproductive and public health implications. *Sexually Transmitted Diseases, 35*, 529-532.
- Jarama, S. L., Belgrave, F. Z., Bradford, J., Young, M., & Honnold, J. A. (2007). Family, cultural and gender role aspects in the context of HIV risk among African American women of unidentified HIV status: An exploratory qualitative study. *AIDS Care, 19*, 307-317.
- Jemmott, J. B., Jemmott, L. S., & Fong, G. T. (1992). Reductions in HIV risk-associated sexual behaviors among Black male adolescents: Effects of an AIDS prevention intervention. *American Journal of Public Health, 82*, 372-377.
- Jones, T. (2011). *Gender, race, power and condom-use: Understanding relationship power and condom-use among young heterosexually active adults*. Retrieved from: <http://search.proquest.com/docview/893761508?accountid=9840>
- Kim, S., De la Rosa, M., Trepka, M. J., & Kelley, M. M. (2007). Condom use among unmarried students in a Hispanic-serving university. *AIDS Education and Prevention, 19*, 448-461. doi:10.1521/aeap.2007.19.5.448
- Krings, K. M., Matteson, K. A., Allsworth, J. E., Mathias, E., & Peipert, J. F. (2008). Contraceptive choice: How do oral contraceptive users differ from condom users and women who use no contraception?. *American Journal of Obstetrics and Gynecology, 198*, E46-E47.
- Krishnan, S., Dunbar, M. S., Minnis, A. M., Medlin, C. A., Gerdtts, C. E., & Padian, N. S. (2008). Poverty, gender inequities, and women's risk of Human Immunodeficiency Virus/AIDS. *Annals of the New York Academy of Sciences, 1136*, 101-110.
- Leddy, A., Chakravarty, D., Dladla, S., de Bruyn, G., & Darbes, L. (2015). Sexual communication self-efficacy, hegemonic masculine norms and condom use among heterosexual couples in South Africa. *AIDS Care, 1-6*.
- Lehmiller, J. J., VanderDrift, L. E., & Kelly, J. R. (2014). Sexual communication, satisfaction, and condom use behavior in friends with benefits and romantic

partners. *Journal of Sex Research*, 51, 74–85. doi:10.1080/00224499.2012.719167

- Lehrer, J. A., Shrier, L. A., Gortmaker, S., & Buka, S. (2006). Depressive symptoms as a longitudinal predictor of sexual risk behaviors among US middle and high school students. *Pediatrics*, 118, 189-200.
- Logan, T. K., Cole, J., & Leukefeld, C. (2002). Women, sex and HIV: Social and contextual factors, meta-analysis of published interventions and implications for practice and research. *Psychological Bulletin*, 128, 851-885.
- National Center for Health Statistics (US). (2011). *Healthy people 2010: Final review*. Government Printing Office.
- Marín, B. (2003). HIV prevention in the Hispanic community: Sex, culture, and empowerment. *Journal of Transcultural Nursing*, 14, 186-192.
- McGowan, I. (2010). Microbicides for HIV prevention: Reality or hope? *Current Opinion in Infectious Diseases*, 23, 26–31.
- Ménard, K. S., Hall, G. C. N., Phung, A. H., Ghebrial, M. F. E., & Martin, L. (2003). Gender differences in sexual harassment and coercion in college students: developmental, individual, and situational determinants. *Journal of Interpersonal Violence*, 18, 1222-1239.
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood—Structure, dynamics, and change*. New York: Guilford.
- Miller, W. C., Ford, C. A., Morris, M., Handcock, M. S., Schmitz, J. L., Hobbs, M. M., & Udry, J. R. (2004). Prevalence of chlamydial and gonococcal infections among young adults in the United States. *Jama*, 291, 2229-2236.
- Misovich, S. J., Fisher, J. D., & Fisher, W. A. (1997). Close relationships and elevated HIV risk behavior: Evidence and possible underlying psychological processes. *Review of General Psychology*, 1, 72-107.
- Montanaro, E. A., & Bryan, A. D. (2014). Comparing theory-based condom interventions: Health Belief Model versus Theory of Planned Behavior. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 33, 1251-1260.
- Morokoff, P. J., Quina, K., Harlow, L. L., Whitmire, L., Grimley, D. M., & Gibson, P. R. (1997). Sexual assertiveness scale (sas) for women: Development and validation. *Journal of Personality and Social Psychology*, 73, 790–804.
- Morokoff, P. J., Redding, C. A., Harlow, L. L., Cho, S., Rossi, J. S., Meier, K. S., & Brown-Peterside, P. (2009). Associations of sexual victimization, depression, and sexual assertiveness with unprotected sex: A test of the Multifaceted Model of

HIV Risk across gender. *Journal of Applied Biobehavioral Research*, 14, 30-54.
doi:10.1111/j.1751-9861.2009.00039.x

- Munthe, C., Sandman, L., & Cutas, D. (2012). Person centered care and shared decision-making: Implications for ethics, public health and research. *Health Care Analysis*, 20, 231-249.
- Muñoz-Silva, A., Sánchez-García, M., Nunes, C., & Martins, A. (2007). Gender differences in condom use prediction with Theory of Reasoned Action and Planned Behaviour: The role of self-efficacy and control. *AIDS Care*, 19, 1177-1181.
- Nesoff, E. D., Dunkle, K., & Lang, D. (2016). The impact of condom use negotiation self-efficacy and partnership patterns on consistent condom use among college-educated women. *Health Education & Behavior*, 43, 61-67.
- Noar, S., Morokoff, P., & Redding, C. (2001). An examination of transtheoretical predictors of condom use in late-adolescent heterosexual men. *Journal of Applied Biobehavioral Research*, 6, 1-26.
- Norris, A. E., & Ford, K. (1995). Condom use by low-income African American and Hispanic youth with a well-known partner: Integrating the Health Belief Model, Theory of Reasoned Action, and the construct accessibility model. *Journal of Applied Social Psychology*, 25, 1801-1830. doi:10.1111/j.1559-1816.1995.tb01819.x
- Parsons, J. T., Halkitis, P. N., Bimbi, D., & Borkowski, T. (2000). Perceptions of the benefits and costs associated with condom use and unprotected sex among late adolescent college students. *Journal of Adolescence*, 23, 377-391.
- Pascarella, A. (2005). An evaluation of the Protection Motivation Theory using sexual behavior in college students. *Dissertation Abstracts International*, 66, 2806.
- Prat, F., Planes, M., Gras, M. E., & Sullman, M. J. (2015). Perceived pros and cons of condom use as predictors of its consistent use with a heterosexual romantic partner among young adults. *Current Psychology*, 35, 13.
- Perrino, T., Gonzalez-Soldevilla, A., Pantin, H., & Szapocznik, J. (2000). The role of families in adolescent HIV prevention: A review. *Clinical Child and Family Psychology Review*, 3, 81-96.
- Perez-Escamilla R. (2010). Health care access among Latinos: Implications for social and health care reforms. *Journal of Hispanic Higher Education*, 9, 43-60.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, 47, 1102-1114.

- Prochaska, J. O., & Velicer, W. F. (1997). The Transtheoretical Model of health behavior change. *American Journal of Health Promotion, 12*, 38-48.
- Raj, A., Amaro, H., Cranston, K., Martin, B., Cabral, H., Navarro, A., Conron, K. (2001). Is a general women's health promotion program as effective as an HIV-intensive prevention program in reducing HIV risk among Hispanic women? *Public Health Reports, 116*, 599-607.
- Reece, M., Herbenick, D., Monahan, P. O., Sanders, S. A., Temkit, M., & Yarber, W. L. (2008). Breakage, slippage, and acceptability outcomes of a condom to penile dimensions. *Sexually Transmitted Infections, 84*, 143-149.
- Reid, A. E., & Aiken, L. S. (2011). Comparison and integration of five health behaviour models: Common strengths and unique contributions to understanding condom use. *Psychology & Health, 26*, 1499–1520. doi: 10.1080/08870446.2011.572259
- Rickert, V. I., Sanghvi, R., & Wiemann, C. M. (2002). Is lack of sexual assertiveness among adolescent and young adult women a cause for concern? *Perspectives on Sexual and Reproductive Health, 34*, 178-183.
- Rippetoe, P. A., & Rogers, R. W. (1987). Effects of components of Protection-Motivation Theory on adaptive and maladaptive coping with a health threat. *Journal of Personality and Social Psychology, 52*, 596–604.
- Roberts, E. T., & Matthews, D. D. (2012). HIV and chemoprophylaxis, the importance of considering social structures alongside biomedical and behavioral intervention. *Social Science & Medicine, 75*, 1555-1561. doi:10.1016/j.socscimed.2012.02.016
- Rogers, R. W. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised Theory of Protection Motivation. In J. T. Cacioppo & R. E. Petty (Eds.), *Social psychology: A source book* (pp. 153–176). New York: Guildford Press.
- Rogers, R. W., & Prentice-Dunn, S. (1997). Protection Motivation Theory. In D. S. Gochman (Ed.), *Handbook of health behavior research I: Personal and social determinants* (pp. 113–132). New York: Plenum Press.
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1988). Social Learning Theory and the Health Belief Model. *Health Education Quarterly, 15*, 175–183.
- Rotheram-Borus, M. J., Swendeman, D., & Chovnick, G. (2009). The past, present, and future of HIV prevention: integrating behavioral, biomedical, and structural intervention strategies for the next generation of HIV prevention. *Annual Review of Clinical Psychology, 5*, 143.
- Sacco, W. P., Rickman, R. L., Thompson, K., Levine, B., & Reed, D. L. (1993). Gender differences in AIDS-relevant condom attitudes and condom use. *AIDS Education and Prevention, 5*, 311-326.

- Schachner, D. A., & Shaver, P. R. (2004). Attachment dimensions and sexual motives. *Personal relationships, 11*, 179-195.
- Sakaluk, J. K. & Gillath, O. (2014). The causal effects of relational security and insecurity on condom use Attitudes and acquisition behavior. *Archives of Sexual Behavior, 45*, 339-352.
- Sanders-Philips, K., (2002). Factors influencing HIV/AIDS in women of color. *Public Health Report, 117*, S151-S156.
- Santelli, J. S., Lindberg, L. D., Finer, L. B., & Singh, S. (2007). Explaining recent declines in adolescent pregnancy in the United States: The contribution of abstinence and improved contraceptive use. *American Journal of Public Health, 97*, 150–156.
- Santelli, J., Morrow, B., Anderson, J. E., & Lindberg, L. (2006). Contraceptive use and pregnancy risk among U.S. high school students, 1991-2003. *Perspectives on Sexual and Reproductive Health, 38*, 106-111.
- Senn, T. E., Carey, M. P., Vanable, P. A., Coury-Doniger, P., & Urban, M. A. (2006). Childhood sexual abuse and sexual risk behavior among men and women attending a sexually transmitted disease clinic. *Journal of Consulting and Clinical Psychology, 74*, 720.
- Shearer, C. L., Hosterman, S. J., Gillen, M. M., & Lefkowitz, E. S. (2005). Are traditional gender role attitudes associated with risky sexual behavior and condom-related beliefs?. *Sex Roles, 52*, 311-324.
- Sheeran, P. & Orbell, S. (1998). Does intention predict condom use? A meta analysis and test of four moderators. *British Journal of Social Psychology, 37*, 231–250.
- Shrier, L. A., Ancheta, R., Goodman, E., Chiou, V. M., Lyden, M. R., & Emans, S. J. (2001). Randomized controlled trial of a safer sex intervention for high-risk adolescent girls. *Archives of Pediatrics & Adolescent Medicine, 155*, 73-79.
- Sionean, C. & Zimmerman, R. S. (1999). Moderating and mediating effects of socioeconomic status, perceived peer condom use, and condom negotiation on sexual risk behavior among African- American and white adolescent females. *Annals of the New York Academy of Sciences, 896*, 474-476.
- Small, E., Weinman, M. L., Buzi, R. S., & Smith, P. B. (2010). Explaining condom use disparity among Black and Hispanic female adolescents. *Child and Adolescent Social Work Journal, 27*, 365-376.
- Snead, M. C., O'Leary, A. M., Mandel, M. G., Kourtis, A. P., Wiener, J. J., Jamieson, D. J., Warner, L., Malotte, C. K., Klausner, J. D., O'Donnell, L., & Reitmeijer, C. A. (2014). Relationship between Social Cognitive Theory constructs and self-

- reported condom use: Assessment of behaviour in a subgroup of the safe in the city trial. *BMJ OPEN*, 4, e006093. doi:10.1136/bmjopen-2014-006093
- Steckler, A., & McLeroy, K. R. (2008). The importance of external validity. *American Journal of Public Health*, 98, 9-10.
- Strachman, A., & Impett, E. A. (2009). Attachment orientations and daily condom use in dating relationships. *Journal of Sex Research*, 46, 319–329. doi:10.1080/00224490802691801
- Tanner, J. F., Day, E., & Crask, M. R. (1989). Protection Motivation Theory: An extension of fear appeals theory in communication. *Journal of Business Research*, 19, 267–276.
- Thorburn, S., & Bogart, L. M. (2005). Conspiracy beliefs about birth control: Barriers to pregnancy prevention among African Americans of reproductive age. *Health Education Behaviors*, 32, 474–487.
- Tung, W. C., Farmer, S., Ding, K., Tung, W. K., & Hsu, C. H. (2009). Stages of condom use and decisional balance among college students. *International Nursing Review*, 56, 346-353.
- Wagner, M. K. (2001). Behavioral characteristics related to substance abuse and risk-taking, sensation seeking, anxiety sensitivity, and self-reinforcement. *Addictive Behaviors*, 26, 115- 120.
- Weiser, S. D., Tuller, D. M., Frongillo, E. A., Senkungu, J., Mukiibi, N., & Bangsberg, D. R. (2010). Food insecurity as a barrier to sustained antiretroviral therapy adherence in Uganda. *PloS one*, 5, e10340.
- White, H. (2007). STDS two and a half times more prevalent in lesbians than normal women. *Life Site News*. Retrieved from: <https://www.lifesitenews.com/news/stds-two-and-a-half-times-more-prevalent-in-lesbians-than-normal-women>
- Winfield, E. B., & Whaley, A. L.(2002). A comprehensive test of the Health Belief Model in the prediction of condom use among African American college students. *Journal of Black Psychology*, 28, 330-346.
- Wingood, G. M., & DiClemente, R. J., (2000). Application of the Theory of Gender and Power to examine HIV-related exposures, risk factors and effective interventions for women. *Health Education and Behavior*, 27, 539-565.
- Woolf, S. E., & Maisto, S. A. (2008). Gender differences in condom use behavior? The role of power and partner-type. *Sex Roles*, 58, 689-701.
- Wong, C. Y., & Tang, C. S. K. (2001). Understanding heterosexual Chinese college students' intention to adopt safer sex behaviors. *Journal of Sex Research*, 38, 118-126.

- Wulfert, E., & Wan, C. K. (1993). Condom use: A Self-Efficacy Model. *Health Psychology, 12*, 346-353. doi:10.1037/0278-6133.12.5.346
- Young, M., Penhollow, T. M., & Bailey, W. C. (2010). Hooking-up and condom provision: Is there a double standard? *American Journal of Health Studies, 25*, 156–164.
- Zamboni, B. D., Crawford, I., & Williams, P. G.(2000). Examining communication and assertiveness as predictors of condom use: Implications for HIV prevention. *AIDS Education and Prevention, 12*, 492-504.
- Zerubavel, N., & Messman-Moore, T. L. (2013). Sexual victimization, fear of sexual powerlessness, and cognitive emotion dysregulation as barriers to sexual assertiveness in college women. *Violence Against Women, 19*, 1518-1537.
- Zhang, H., Stanton, B., Li, X., Mao, R., Sun, Z., Kaljee, L., & Qu, M. (2004). Perceptions and attitudes regarding sex and condom use among Chinese college students: A qualitative study. *AIDS and Behavior, 8*, 105-117. doi:10.1023/B:AIBE.0000030242.46843.71
- Zodda, J. J. (2015). Condom use among deaf college students. *Journal of the American Deafness and Rehabilitation Association, 49*, 86–101.