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Black women are one of the fastest growing minority populations on United States (US) college campuses. In addition, they are disproportionately burdened by the sexually transmitted infection (STI) and HIV epidemics facing young adults. Despite these deleterious health outcomes, little is known about the sexual behaviors and factors that affect Black college women's sexual health. One avenue of sexual health research with potential to shed light on this population's sexual behavior and risk is hookup culture. The 'hookup'—a casual sexual encounter between individuals without the expectation of a dating or romantic relationship—has become increasingly prevalent on US college campuses with 60-80% of students reporting at least one hookup experience during their college career. Considering that young adults aged 15-24 account for half of new STI diagnoses in the US each year, hookups present a potential health risk to college students. However, the existing hookup literature is overwhelming White and female, and often exclusive of historically marginalized populations such as Black women.

The data resulting from predominantly White, female samples creates generalizations and assumptions regarding prototypical hookup behaviors and experiences among college students, which may inadvertently mask important racial/ethnic differences in sexual behaviors and corresponding risks. The masking of Black women's experiences could lead to the oversight of possible risk and protective factors that influence their sexual and reproductive health. The near absence of Black

women in the literature is indicative of a need for intersectional research examining the possible role of race and gender on hookup participation.

The purpose of this dissertation study was two-fold. The first goal was to quantitatively examine the intersecting relationship of race and gender and its association with hookup attitudes and condomless vaginal sex during hookups. The study also explored the association between pre-hookup relationship intentions and condomless vaginal sex. The second goal of the study was to qualitatively describe Black college women's perceptions of and attitudes toward hookup culture on their respective college campuses. The two papers included in this dissertation addressed the following research questions: (1) "What is the association between the intersection of race and gender and attitudes toward hookups?" and (2) "What is the association between pre-hookup relationship intentions, race, gender and condom use during last vaginal hookup encounter?" Preliminary findings from the qualitative phase of the study are also discussed.

In all, the quantitative findings from this study indicated that both race and gender were statistically, significantly associated with college students' attitudes toward hooking up. Black students and female students held more conservative attitudes toward hooking up than their White and male counterparts, respectively. Further, both race and gender were statistically, significantly associated and condom use during last vaginal hookup. Black students and male students were more likely to report condom use during their last vaginal hookup when compared to their White and female counterparts, respectively. Pre-hookup relationship intentions were also found to play a significant role in condom use at

last vaginal hookup. Students who desired a relationship with their hookup partner were less likely to report condom use than those who had no desire or were unsure of their relationship intentions. In both studies, the interaction between race and gender was found to have no influence on attitudes toward hooking up and condom use during last vaginal hookup.

The preliminary qualitative findings from the focus groups suggest that Black college women's sexual attitudes and experiences of romantic and casual sexual relationships with hookup culture are influenced by both racial and gendered stereotypes and expectations of appropriate sexual behavior. Accordingly, future research should further examine the intersectional influences of race and gender on Black college women's sexual experiences to enhance our understanding of the sexual health disparities facing this population and inform culturally congruent interventions.

BLACK COLLEGE WOMEN'S SEXUAL ATTITUDES AND BEHAVIORS
WITHIN THE CONTEXT OF HOOKUP CULTURE:
A MIXED METHOD STUDY

by

Wendasha Jenkins Hall

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Approved by

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To Peggy, Ma Mary, Nancy, Mary Lee, Melinda, Zora,
and the generations of women to come...

APPROVAL PAGE

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CHAPTER I

INTRODUCTION

Statement of the Problem

The ‘hookup’—a casual sexual encounter between individuals without the expectation of a dating or romantic relationship (Garcia, Reiber, Massey, & Merriwether, 2012)—has become increasingly prevalent on college campuses in the United States (US). With 60-80% of students reporting at least one hookup experience during their college career (Garcia et al., 2012), the hookup is often touted as a hallmark of the college experience, yet a potential impediment to traditional dating and courtship (Bogle, 2008; Calzo, 2013; Fielder & Carey, 2010a; Garcia et al., 2012; Lambert, Kahn, & Apple, 2003; Paul & Hayes, 2002; Paul, McManus, & Hayes, 2000). These sexual encounters, which can include coital and non-coital behaviors, are a unique point of study as they provide developmentally appropriate avenues for sexual experimentation, agency, and pleasure (Dworkin, 2005; Paul & White, 1990; Snapp, Ryu, & Kerr, 2015; Stinson, 2010). Considering that young adults aged 15-24 account for half of new STI diagnoses in the US each year (Centers for Disease Control and Prevention, 2016), the normalization of hookup culture on campuses may facilitate participation in high-risk behaviors that render students particularly susceptible to sexually transmitted infections (STIs), including HIV (Allison & Risman, 2013; Bradshaw, Kahn, & Saville, 2010; Fielder & Carey, 2010a; Fielder, Walsh, Carey, & Carey, 2014).

Given the potential health risks posed by these sexual encounters, the need exists to critically examine this cultural phenomenon on college campuses. Yet, the existing hookup literature is overwhelming White and female, and often exclusive of historically marginalized populations such as Black women. Black women are one of the fastest growing populations on US college campuses. Outpacing their male counterparts, this population represents nearly 62% of the Black undergraduates enrolled in US colleges and universities (Snyder & Dillow, 2015). Despite their growing presence, Black women are greatly underrepresented in hookup literature. This underrepresentation is problematic considering the copious amount of literature documenting the deleterious effect of STIs and HIV/AIDS on young Black women (Centers for Disease Control and Prevention, 2014, 2015a, 2015b) and the growing body of literature detailing the potential negative sexual health outcomes associated with hookup behaviors among college students.

The lack of Black college women representation in current literature makes comparisons in hookup experiences difficult. Instead, the data resulting from predominantly White female samples creates generalizations and assumptions regarding prototypical hookup behaviors and experiences among college students, which may inadvertently mask important racial/ethnic differences in hookup attitudes and behaviors. The masking of Black women's experiences could lead to the oversight of possible risk and protective factors that influence their sexual and reproductive health. The near absence of Black women is indicative of a lack of intersectional research examining the possible role of race and gender on hookup participation.

Purpose of the Study

The purpose of this dissertation study was two-fold. The first goal was to examine the intersecting relationship of race and gender and its association with hookup attitudes and condomless vaginal sex. The study also explored the association between pre-hookup relationship intentions and condomless vaginal sex. The second goal of the study was to explore and describe Black college women's perceptions of and attitudes toward hookup culture on their respective college campuses.

Research Questions

Quantitative Questions

1. What is the association between the intersection of race and gender and attitudes toward hookups?
2. What is the association between pre-hookup relationship intentions, race, gender and condom use during last vaginal hookup encounter?

Qualitative Questions

1. What are Black college women's perceptions of and attitudes toward romantic and casual sexual partnerships on college campuses?
 - a. How do Black women describe racial and gender differences in sexual partnering?

CHAPTER II

REVIEW OF LITERATURE

Introduction

Black women are one of the fastest growing minority populations on US college campuses. They currently make up 16% of the U.S. female student population (National Center for Education Statistics, 2014). Surpassing their male counterparts, Black women represent nearly 62% of the estimated 2.5 million Black undergraduates enrolled in US colleges and universities (NCES, 2014). This population has made significant gains in higher education attainment in recent years (US Census Bureau, 2012), yet they are disproportionately burdened by the sexually transmitted infection (STI) and HIV epidemics facing young adults. Behind gay, bisexual, and other men who have sex with men (MSM), Black women outpace their gender and racial counterparts in chlamydia, gonorrhea, and HIV infection (CDC, 2013; CDC, 2014). Despite these deleterious health outcomes, little is known about the sexual behaviors and risk and protective factors that impact Black college women's sexual risk. One area of sexual health research with potential to shed light on this population's sexual behavior is hookup culture.

Hookups—casual sexual encounters between individuals without the expectation of a dating or romantic relationship (Garcia et al., 2012)—are often touted as a hallmark of the college experience and an important avenue for understanding the sexual

partnering practices and risk behaviors of college students (Berntson, Hoffman, & Luff, 2014; Downing-Matibag & Geisinger, 2009; Grello, Welsh, & Harper, 2006; Owen, Fincham, & Moore, 2011; Paul et al., 2000). With 60%-80% of college students reporting a hookup experience (Bogle, 2008; Eshbaugh & Gute, 2008; Fielder & Carey, 2010a; Garcia et al., 2012; T. A. Lambert et al., 2003; Paul et al., 2000), researchers seek to examine the sexual dynamics of hookups in order to provide critical insight into students' sexual decision-making during this critical period of transition to adulthood. Considering the growing presence of Black women on college campuses, hookup research could shed light on the risk and protective factors influencing HIV and STI acquisition among Black collegiate women.

Examining Black college women's sexual practices in the context of hookup culture is needed as much of the extant HIV/STI research involving Black women is exclusive of those in college (Alleyne, 2008; Younge, Corneille, Lyde, & Cannady, 2013). This oversight may be due to the assumption that educational attainment mitigates HIV and STI risk (Crosby et al., 2007; Painter, Wingood, DiClemente, DePadilla, & Simpson-Robinson, 2012; Ross & Wu, 1995). Although, education is a protective factor against STI and HIV acquisition, research shows that college education is not the panacea to this population's sexual risk (Buhi, Marhefka, & Hoban, 2010; Hou, 2009; Sutton et al., 2011). Instead, on account of being female, Black, and college students, Black college women face multiple behavioral and social risk factors for HIV and STI acquisition (Alleyne, 2008). Like general college populations, Black college women's risk is shaped by several behavioral and developmental factors such as feelings of invincibility, low risk

perception, multiple/concurrent partnerships, and inconsistent condom use. At the same time, the social factors common to women and Blacks (e.g. poverty, gender-ratio imbalances, and power disparities) also shape their risk. Given that Black college women are simultaneously affected by the sexual health disparities faced by college students, women, and the Black population, these identities need to be examined for how they together produce and maintain sexual health disparities. Thus, intersectional research examining the multiplicative effect of race and gender on hookups is necessary to support a complete understanding of the associated health outcomes among Black college women (Hamilton & Armstrong, 2009).

In this chapter, I discuss intersectionality as a theoretical framework and its utility for hookup research. I then review relevant literature regarding social and behavioral factors that influence the sexual health of Black college women and hookup culture on college campuses. In my discussion of the factors influencing Black women's sexual health, I focus on gender ratio imbalances and power disparities, racial homophily, and sexual risk behaviors and perceptions. My review of hookup culture literature centers on prevalence, definitions, sexual risk, and gender and racial differences. Finally, I close the chapter with a discussion of the implications of including Black women in hookup research and the rationale for my proposed study.

Theoretical Lens: Intersectionality

Rooted in Black feminist and womanist scholarship, intersectionality considers how the individual experience of multiple, intersecting social identities (e.g. race, gender, and class) at the micro level intersect with the multiplicative, interlocking systems of

oppression and privilege (e.g. racism, sexism, and classism) at the macro level to produce and maintain social inequalities (Bowleg, 2012; Cho, Crenshaw, & McCall, 2013; Hankivsky, 2012). First coined by Black feminist legal scholar Kimberlé Crenshaw (1989), intersectionality was a response to the exclusion of Black women's experiences from second-wave feminist and anti-racist discourses which implicitly associated women with Whiteness and Blackness with men (Bowleg, 2012; Hankivsky, 2012). Crenshaw and other Black feminist scholars argue that the experiences of Black women cannot be understood in terms of being Black and being a woman, as they embody both social identities and experience the effects of sexism and racism simultaneously (Collins, 2000; Crenshaw, 1989; hooks, 1984). In essence, intersectionality pushes against the limitations of analyzing social identities singularly and considers how multiple social identities are mutually constitutive and inextricably linked to larger social systems of power and oppression.

Since its introduction as a theoretical framework, Intersectionality has been conceptualized and understood in various ways (Few-Demo, 2014; McCall, 2005) and extended to include the experiences of other marginalized populations (e.g. gay men, individuals with disabilities, immigrants) and systems of oppression such as heterosexism, (dis)ability, and nationality (Bowleg, 2013; Chun, Lipsitz, & Shin, 2013; Hirschmann, 2013). However, there are several core tenets that undergird the framework. These tenets are as follows: (1) social identities are multidimensional, interdependent, and intersecting; (2); social identities are socially constructed, fluid and flexible; (3) multiple social identities converge at the micro level and intersect with structural and

institutional factors at the macro level to produce, and reproduce, privilege and oppression; (4) no axis of oppression is considered greater or more damaging than another; and (5) people from multiple marginalized or disadvantaged groups should be the focal or starting point of study (Bowleg, 2012; Hankivsky, 2012). Because of its unique focus on the complex interplay between social identities and social systems and the resulting power disparities that emerge, intersectionality has expanded beyond its roots in legal studies and gender studies and is now applied in multiple fields of inquiry (Bauer, 2014; Few-Demo, 2014). One such field is sexual health research.

In sexual health research, intersectionality breaks from the traditional biomedical framework that views disease and illness through the lens of biologic and genetic factors (Bowleg, 2012). Although these factors certainly play a role in bodily function and disease production, evidence suggests that biology and genetics only account for a small proportion of sexual health disparities impacting Black women (Davis & Tucker-Brown, 2013; Lekan, 2009). Research suggests that intra- and interpersonal level factors as well as community, institutional, and policy level factors (Bowleg, 2012) contribute to the social production of health. Further, health is often dependent upon one's intersecting social identities of race, gender, age, class, and sexual orientation (Bowleg, 2012; Lekan, 2009). As such, the intersections of race and gender identities could prove advantageous or deleterious to Black women's health. Research illustrates that their sexual health is influenced by sociocultural factors that are exacerbated by both racism and sexism (Collins, 2000, 2004; Davis & Tucker-Brown, 2013). Thus, an intersectionality

perspective centers, not essentializes, Black women's experiences with their sexuality; understanding that Black women share a collective experience but are not monolithic.

Several scholars have detailed the shortcomings of biomedical/behavioral models in health research (Bauer, 2014; Bowleg, 2012; Hankivsky, 2012; Weber & Parra-Medina, 2003; D. R. Williams et al., 2012). First, biomedical/behavioral models are critiqued for their narrow focus on individual characteristics and social group differences (Bauer, 2014; Lekan, 2009). Critics argue that little attention is given to the complex, macro-level social systems and institutions that give meaning to individual characteristics, shape social group differences, and exacerbate disease burdens through the empowerment of some groups and the disempowerment of others (Bauer, 2014; Bowleg, 2012; Lekan, 2009; Weber & Parra-Medina, 2003). Inattention to these systems of power and oppression often reinforces values of the dominant culture, which positions Whites, men, heterosexuals, and the middle/upper classes as reference groups and positions other groups as deviations from the established norms (Bauer, 2014; Bowleg, 2012; Rogers & Kelly, 2011; Weber & Parra-Medina, 2003).

Second, researchers employing these models often conceptualize race, gender, class, and other social identities as discrete categories of difference that can be independently assessed (Bauer, 2014; Bowleg, 2008; Hankivsky & Christoffersen, 2008; Lekan, 2009; Weber & Parra-Medina, 2003). This treatment of social identities undermines their interlocking, mutually constitutive nature. Privileging one axis of identity over others implies identities are mutually exclusive and additive, which negates the experiences of those embodying multiple oppressed identities. Research singularly

addressing morbidity and mortality among women or racial minorities is often insufficient as individuals are often a part of both groups.

In response to the limitations inherent in biomedical/behavioral models, several scholars call for the adoption of intersectionality in health research (Bauer, 2014; Bowleg, 2012; Hankivsky et al., 2010; Lekan, 2009; Shim, 2002; Williams et al., 2012). Intersectionality shifts the focus of health disparities research from individual attributes and discrete social processes to one that conceptualizes race, gender, class and other social identities as “historically created relationships of differential distribution of resources, privilege, and power, of advantage and disadvantage” (Mullings, 2005, p. 79-80). Thus, this framework extends beyond conventional biomedical/behavioral models and challenges researchers to consider how disease and illness, or health and wellness, are often manifestations of one’s privileged, or oppressed, social positioning.

Conceptually, intersectionality has much to offer the field of sexual health research. Intersectionality scholar Lisa Bowleg asserts that intersectionality benefits public health research in five meaningful ways by: (1) providing a unifying language and theoretical framework for scholars investigating the intersections of social identities to reduce health disparities, (2) prompting researchers to conceptualize and analyze disparities in complex and multidimensional ways, (3) focusing on macro-level social structures and their relation to individual social identities; (4) centering the experiences of historically oppressed or marginalized groups, and (5) promoting the collection, analysis, and presentation of data that allow examination of multiple interlocking social identities (Bowleg, 2012).

Factors Impacting Black College Women's Sexual Health

Black women face the task of reconciling their racial and gender identities within the social contexts of college campuses. In doing so, they negotiate a set of socially and culturally prescribed beliefs and norms regarding race, gender, and sexuality that may be incongruent with the increasingly sexual permissive climates, behaviors, and attitudes present on college campuses (Bazargan, Kelly, Stein, Husaini, & Bazargan, 2000; Bogle, 2007). A small but growing body of research has explored the behavioral and social factors influencing Black women's sexual risks within college contexts (Alleyne & Wodarski, 2009; Foreman, 2003b; Hall, Lee, & Witherspoon, 2014; Roberts & Kennedy, 2006; Sutton et al., 2011). However, more research is needed considering the significant sexual health disparities facing young Black women. Specifically, research regarding gender ratio disparities and power imbalances, racial homophily, and sexual risk behaviors and perceptions is needed as these are all gendered and racial factors that shape Black women's sexual behavior on college campuses (Alleyne & Gaston, 2010; Foreman, 2003a; Hall et al., 2014).

Gender Ratio Imbalances and Power Disparities

Women make up 56% of the undergraduate student population in the US (Snyder & Dillow, 2015). Consistent with this enrollment trend, Black women outnumber Black male students on college campuses. Of the estimated 2.6 million Black students enrolled in post-secondary undergraduate institutions in Fall 2012, 1.7 million (65%) were Black women (Snyder & Dillow, 2015). This ratio imbalance is also prevalent on the campuses of Historically Black Colleges and Universities (HBCUs) where women account for

about 60% of the student body (National Center for Education Statistics, 2015). Some HBCU campuses have female enrollments as high as 76% (Gasman, 2013). Several social factors are reported to explain the gender imbalance in Black college enrollment. Higher rates of mortality due to violence (Centers for Disease Control and Prevention, 2013a), higher incarceration rates (Charles & Luoh, 2010), and lower graduation rates due to enrollment in underperforming high schools (Schott Foundation for Public Education, 2015) are associated with lower college enrollment among Black males. Consequently, these dramatic gender discrepancies affect the sexual networks of Black college students.

Gender ratio imbalances often produce complex sexual relationship patterns that yield more power to male students (Alleyne & Gaston, 2010; Ferguson et al., 2006). The disproportionate number of Black women to Black men is advantageous to men, as they have more options and power when selecting and engaging heterosexual partners (Bogle, 2007; Heldman & Wade, 2010). This power disparity places Black women in an unfavorable position in campus sexual markets. To illustrate, Hall et al. (2014) found that Black women expressed interest in committed relationships but often engaged in casual, non-monogamous relationships or hookups because Black men on campus were not interested in commitment. Because of Black men's limited numbers and value on campuses, the sexual partnering and behavior of Black women desiring heterosexual partnerships may conform to the preferences of their male counterparts (Alleyne & Gaston, 2010; Ferguson et al., 2006; Hall et al., 2014).

A study conducted by Ferguson and colleagues (Ferguson et al., 2006) among Black HBCU students revealed that women desiring to participate in the campus dating scene were often required to navigate the culture of ‘man sharing’—the practice of engaging in a sexual relationship with a man who is concurrently involved with another woman or women. Faced with a limited number of suitable male partners and competition from other female students, ‘man sharing’ presents an option for women seeking heterosexual romantic and sexual partnerships. Notably, ‘man sharing’ is not always voluntary as some women unknowingly date men who are involved with other women (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992; Ferguson, Quinn, Eng, & Sandelowski, 2006). Conversely, women choosing not to participate in ‘man sharing’ must consider other dating alternatives (e.g. dating outside the university community) or abstain from dating.

The culture and practice of ‘man sharing’ presents a sexual health risk as men’s relative value and power in campus dating scenes may influence safer sex practices, such as condom use, among Black women. For instance, research suggests that women may forego condom use to secure emotional attachments, increase relational intimacy, or avoid rejection from their partners (Ferguson et al., 2006; Foreman, 2003a, 2003b). Further, the existing power imbalances often lessen women’s ability to negotiate condom use and discuss safer sex openly due to fear of losing a partner to another woman and social norms regarding appropriate sexual behavior (Newsome, Airhihenbuwa, & Snipes, 2014).

Racial Homophily

The impact of gender ratio imbalances may also be influenced by racial homophily. Reflective of national trends, Black students tend to partner with members of the same race (Pew Research Center, 2015). Racial homophily in sexual and romantic partnerships is generally the norm across all racial groups; however, Black women are significantly less likely to engage in interracial partnerships (Pew Research Center, 2015). These partnering preferences are partially fueled by racist stereotypes surrounding Black sexuality. For centuries, Blacks have been depicted as innately hypersexual and less desirable romantic partners (Collins, 2000, 2004). These conceptualizations of Black sexuality may color sexual interactions as inter- and inter-race preferences for Black partners are often tinted with stereotypical images of the “well-endowed”, “lusty”, “forbidden” lover (Collins, 2004; Phua & Kaufman, 2003; Staples, 2006). Two salient stereotypes plaguing Black college women is that of the Jezebel—a aggressively promiscuous and salacious women exhibiting unbridled, animalistic, lewd and lascivious sexual behavior and desire—and the Sapphire—a overly aggressive and emasculating woman (Collins, 2000; Stephens & Phillips, 2003). Accordingly, non-Black college students may avoid Black partners because of these stereotypes or these very stereotypes may contribute to non-Blacks fetishization and eroticization of Black bodies which may make Blacks more desirable partners (McClintock, 2010). Studies have shown connections between the exposure to these sexual stereotypes and the sexual decision making of young Black women (Davis & Tucker-Brown, 2013; Duvall et al., 2013; Littlefield, 2008; Stephens & Few, 2007; Wingood et al., 2003). For illustration,

Williams' (2012) exploratory study of Black undergraduate women found a link between sexual stereotypes and behaviors perpetuated in mass media and the acceptance of casual sex.

These stereotypes have evolved over the years, yet, Black college women seeking to avoid commodification and eroticization may find solace in intra-racial partnerships. This may be true for Black women attending PWIs. On the campuses of PWIs, Black students tend to be socially isolated, which drives the development and maintenance of a strong group identity motivated by a shared experience of ongoing racial discrimination (Massey, 1990; McClintock, 2010; Sears, Fu, Henry, & Bui, 2003). Group identity aside, Black college men are more likely to engage in interracial sexual partnerships while Black women exhibit a strong bias toward homophily (McClintock, 2010). The significantly disproportionate ratio of Black men to Black women on college campuses creates more options for choosing sexual partners for Black men and diminishes the sexual networks of Black women (Alleyne & Gaston, 2010; Ferguson et al., 2006; Hall et al., 2014; McNair & Prather, 2004). Thus, Black women desiring Black male partners may fear sexual rejection due to inter- and intra-racial competition and engage in relationships that compromise their sexual health (Airhihenbuwa et al., 1992; McNair & Prather, 2004; Newsome et al., 2014). Newsome and colleagues (2014) found Black college women were knowledgeable of the risks of unprotected sex and the importance of HIV testing, yet some women expressed fear of losing sexual partners to other women for non-compliance with their partners' desire for unprotected sex.

Sexual Risk Behaviors and Perceptions

Data illustrate Black college women's elevated risk for STI and HIV acquisition, yet this does not necessarily translate to higher perceptions of risk and behavior modification among this population (Annang, Johnson, & Pepper-Washington, 2009; Bazargan et al., 2000; Foreman, 2003b). Black women are not unique as high-risk sexual behaviors and low risk perceptions are common among college students. College represents a developmental period marked by increased independence from parental guidance, feelings of invincibility, and sexual exploration and experimentation (Arnett, 2000; J. Dworkin, 2005; Manning, Giordano, & Longmore, 2006).

Accordingly, Buhi and colleagues (2010) found similar percentages of Black and White college women report ever engaging in vaginal sex—66.6% vs 66.9%, respectively; however, Black women were less likely to report ever having oral or anal sex. The researchers also found no significant difference in the number of sexual partners within the last school year reported by both groups of women (Buhi, Marhefka, & Hoban, 2010). Paradoxically, Black women were more likely to report condom use during vaginal, anal, and oral sex and to report seeking HIV testing, yet they were more likely to report having an STI in the last school year (Buhi et al., 2010). Hou (2009) corroborates these findings, reporting that Black HBCU students were 4.4 times more likely to have had a STI in comparison to White students attending a predominantly white institution (PWI), despite similar rates of condom use during vaginal and anal sex (Hou, 2009).

All research concerning Black college women's condom use does not substantiate these findings. Lewis and colleagues' (2000) study of Black college women revealed

38% of sexually active participants reported at least one previous STI diagnosis and 24% reported they always used condoms. Further, a recent study of 279 first-year college women found that Black women reported lower initial condom use frequencies upon entering college than White women; condom use frequency declined for both Black and White students over the course of their first year of matriculation (Walsh et al., 2013). Norwood and Zhang (2015) also found only 47% of Black college women reported condom use during their last sexual encounter.

The research concerning Black college women's condom use is conflicting and more research is necessary considering data indicating low STI and HIV risk perception among this population (Alleyne & Wodarski, 2009; Sutton et al., 2011). A study of multiethnic college women revealed that 73% of Black participants reported moderate to high-risk sexual behaviors, such as multiple sexual partners, young age at first intercourse, anonymous sex, and anal sex; however, none perceived themselves at high risk for STI acquisition (Roberts & Kennedy, 2006). Voetsch et al.'s (2010) study of 2,705 Black college women found 14% reported having sex with a bisexual man in the previous 12 months. These women were also more likely to report unprotected sex at last intercourse. Yet more than half of the women reporting sex with a bisexual man believed they were at low risk for HIV infection. Similarly, Norwood's (2011) survey of 432 Black college women found that 6% suspected they had sex with a MSM, 26% reported having sex with someone who was previously incarcerated, and 40% reported having a previous STI diagnosis; yet 94.5% of respondents felt they had little to no risk of HIV infection (Norwood, 2011). Inconsistent condom use, engagement in potentially higher

risk sexual behaviors, and limited sexual networks and partnerships are pressing issues that demonstrate the need for further inclusion of Black college women in sexual health research, including research focused on hookups.

Hookup Culture on College Campuses

Hookups are an emerging topic of interest among college and sexual health researchers (Bogle, 2008; Garcia et al., 2012; Heldman & Wade, 2010; Stinson, 2010). Studies investigating this topic date back to Paul, McManus, & Hayes' (2000) seminal article exploring new patterns of sexual partnering among college students. The researchers detailed a new “risky practice” birthed from traditional-aged college students’ “developmental preoccupations with autonomy and sexual interest and experimentation” and the sexual permissive culture of contemporary college campuses (Paul et al., 2000). Accordingly, several researchers have explored this phenomenon in light of the STI epidemic plaguing young adults in the US.

Prevalence of Hookups

Most US college students have experienced some type of casual sex encounter in their lifetime (Bogle, 2008; Fielder & Carey, 2010b; Grello et al., 2006; Gute & Eshbaugh, 2008; Lambert et al., 2003; Lewis, Granato, Blayney, Lostutter, & Kilmer, 2012; Paul et al., 2000). Specifically, data suggests approximately 60% to 80% of US college students report at least one hookup experience during their college careers (Bogle, 2008; Eshbaugh & Gute, 2008; Fielder & Carey, 2010a; Garcia et al., 2012; T. A. Lambert et al., 2003; Paul et al., 2000). However, these estimates include both penetrative (oral, anal, and vaginal) and non-penetrative sexual encounters. Findings

from event-level studies examining college students' most recent hookup encounters found that 15-38% involved oral sex and 27-39% involved vaginal sex (Adkins, England, Risman, & Ford, 2015; Fielder & Carey, 2010b; Fielder et al., 2014; M. A. Lewis et al., 2012; Reiber & Garcia, 2010). These findings imply that many hookups do not involve penetrative sexual intercourse. Instead, non-coital behaviors such as kissing and heavy petting may be more common (Fielder & Carey, 2010b; Paul et al., 2000; Reiber & Garcia, 2010).

Ambiguity of the Term “Hookup”

Although studies suggest non-coital hookups may be more common among college students, these findings may not accurately capture the sexual behaviors occurring in hookup encounters due to the ambiguity of the term “hookup.” There is no universally accepted definition for the term; as result, the operationalization of ‘hookup’ has differed among researchers. In their seminal article, Paul, McManus, and Hayes (2000) defined hookups as “sexual encounter[s], usually lasting one night, between two people who are strangers or brief acquaintances” (p. 76). The researchers went on to describe how physical sexual encounters may or may not include sexual intercourse. In contrast, Glenn and Marquardt (2001) took a heteronormative approach to their definition of hookups. In their national survey of college students, hookups were defined as encounters where “a girl and a guy get together for a physical encounter and don't necessarily expect anything further” (p. 82). Though narrow in scope in terms of sexual orientation, the researchers expanded Paul et al.'s definition beyond one-time sexual encounters between strangers. Glenn et al. considered sexual encounters between

individuals occurring more than once over a period of week or months. Conversely, Owen and colleagues (2010) provided a behavior-centered definition, in which hookups were defined as “a range of physically intimate behavior[s] (e.g., passionate kissing, oral sex, and intercourse) that occurs outside of a committed relationship” (p. 653).

Similarly, research also demonstrates that definitions of hooking up vary among college students (Bogle, 2008; Epstein, Calzo, Smiler, & Ward, 2009; Holman & Sillars, 2012; Lewis, Atkins, Blayney, Dent, & Kaysen, 2013). While attempting to classify hookups, Bogle (2008) found some students felt hooking up specifically referred to sexual intercourse, while others defined the behavior as kissing, making out, or heavy petting. Yet some students suggested that hooking up implies ‘everything’ except sexual intercourse. In another study of college men, Epstein and colleagues (2009) found that all students interviewed conceptualized hookups as ‘short-term’, ‘uncommitted’ sexual encounters that encompass a wide variety of sexual behaviors. However, some men provided alternative definitions for the term. One student expressed the possibility of emotional connections during hookups, while another believed hookups could take place within dating or romantic relationships. Additionally, the importance of context was emphasized, with one student stating he adapts his definition ‘to other people’s definition’ as there is no agreed upon definition of ‘hooking up’. These studies, as well as others, highlight the variability in students and researchers’ definitions of hooking up. Despite these variations, many researchers agree that hookups involve three central elements: (1) both parties are not in a committed relationship with each other, (2) the

encounter is short term, and (3) the encounter can involve a variety of coital and non-coital sexual behaviors (Bogle, 2008; Epstein et al., 2009; Fielder & Carey, 2010a; Lewis et al., 2013).

Hookups and Sexual Risk

Considering the prevalence of hookups on college campuses, the sexual health risks posed by hookups involving penetrative sex are of valid concern. Hookups may elevate the risk of STIs due to inconsistent condom use (Fielder & Carey, 2010b; M. A. Lewis et al., 2012), shorter breaks between sexual partners (Kraut-Becher & Aral, 2003), and the higher likelihood of multiple and concurrent partnerships when compared to romantic relationships (Fielder et al., 2014; Paik, 2010b). An event-level study revealed that over half (53%) of students reported sexual intercourse during their last hookup; however, only 47% reported using a condom (M. A. Lewis et al., 2012). Another study of 10,275 students found that probability of unprotected sex during hookups increases from 7% to 16 % among women, and from 6% to 15% among men between years 1 and 4 of college (Bearak, 2014). The increased probability of unprotected sex may indicate that students do not perceive their hookup behaviors or partners as high risk; for instance, Downing-Matibag & Geisinger (2009) reported only 50% of students were concerned about contracting an STI during a hookup that involved sexual intercourse. These findings lend credence to evidence suggesting hookup participation is a significant predictor of STI incidence (Fielder et al., 2014).

While researchers are considering the specific role hookup participation plays in STI risk, evidence outlining an association remains limited (Claxton & van Dulmen,

2013; Fielder et al., 2014). The dearth of research is possibly attributed to ambiguous nature of hookups. Garcia, Reiber, Massey, and Merriwether (2012) reason that the obscure term “hookup” impacts the investigation of high-risk sexual behaviors among college populations as it grants individuals the opportunity to “adaptively manipulate others’ perceptions of their sexual behavior” (p. 162). While providing a sense of privacy and discretion for the participating individuals, students can discuss their partnerships without explicitly detailing their sexual behaviors. Researchers seeking to examine the influence of hookup participation on STI risk may face barriers due to varying definitions among students. Also, researchers may face issues related to social desirability bias. Social desirability bias in research occurs when study participants underreport socially undesirable activities and over report socially desirable activities in order to be viewed more favorably by researchers (Krumpal, 2013; Stuart & Grimes, 2009). Particularly in studies examining taboo or sensitive topic such as sexual behavior, participants may be more apt to underreport high-risk sexual behavior (e.g. multiple sexual partners and inconsistent condom use) and over report sexual protective factors (e.g. consistent condom use and monogamous partnerships) (Fenton & Erens, 2001).

Gender Differences in Hooking Up

Overall, men and women report similar rates of hooking up (Owen et al., 2010) and often describe these interactions as convenient, pleasurable, and satisfying experiences (Claxton & van Dulmen, 2013; Owen & Fincham, 2011; Owen et al., 2010; Paul & Hayes, 2002; Snapp et al., 2015). Despite these similarities, women tend to report more negative sexual and emotional experiences with hookups than their male

counterparts. Several studies indicate that women are more likely adversely impacted by gender ratio disparities, sexual double standards, negative emotionality, and STIs (Bogle, 2008; Downing-Matibag & Geisinger, 2009; Eshbaugh & Gute, 2008; Flack et al., 2007; Grello et al., 2006; Uecker & Regnerus, 2010).

Gender ratio disparities. Women account for approximately 56% of the US undergraduate population (Snyder & Dillow, 2015); however, their large numbers do not provide an advantage within the campus sexual marketplace—the campus social structures in which individuals search for a partner (Bogle, 2008; Ellingson, Laumann, Paik, & Mahay, 2004; Kelly, 2012; Rhoads, 2012; Uecker & Regnerus, 2010). The gender ratio disparity on campuses influences sexual relationships as the overabundance of women affords men more power in negotiating partner selection and relationship formation; thus, creating more sexually permissive climates that are not mutually beneficial for women (Bogle, 2008; Uecker & Regnerus, 2010). Although women report similar rates of hooking up, research suggests they are significantly more likely to prefer dating than hooking up, with 95% of women preferring dating compared to 77% of men (Bradshaw et al., 2010). Women attending female-majority institutions who desire traditional, heterosexual dating arrangements may be less successful in their searches due to the short supply of suitable, potential partners. Men, on the other hand, enjoy more dyadic power in their sexual and romantic partnerships, which translates to lower relationship commitment and investment due to the oversupply of attractive alternatives within the sexual marketplace (Adkins et al., 2015; Ellingson et al., 2004; Guttentag & Secord, 1983; Uecker & Regnerus, 2010). Accordingly, women attending institutions

where they are the majority sex give more negative assessments of campus men, go on fewer dates, and are less likely to have had a college boyfriend; yet they are more likely to be sexually active (Uecker & Regnerus, 2010). The shortage of male partners, and subsequent dating opportunities, does not appear to hinder the sexual activities of women attending female-majority institutions. Instead women who attend such institutions report more sexual partners, more hookups, and are more accepting of casual sex relationships (Adkins et al., 2015).

Sexual double standards. It is erroneous to assume all women's participation in hookup culture is driven by desires for romantic partnerships characterized by commitment and monogamy. Instead, sexual pleasure, fun, desire for new experiences, and convenience play a role in women's hookup participation (Fielder & Carey, 2010b; Garcia & Reiber, 2008; Kenney, Thadani, Ghaidarov, & LaBrie, 2013; Lewis et al., 2012; Owen & Fincham, 2011; Owen, Quirk, & Fincham, 2014). Theoretically, the sexually permissive climates of college campuses are suitable environments for women seeking sexual experimentation, exploration, and self-discovery; however, this may not be the reality of women seeking such opportunities. Under the guise of permissibility, sexual double standards still exist on college campuses and women are often denigrated for their casual sexual activities (Allison & Risman, 2013; Crawford & Popp, 2003; Gilmartin, 2006). Men are encouraged and expected to desire and pursue sexual opportunities regardless of the sexual and relationship context; yet women are expected to desire love, romance, and marriage and to avoid causal sex outside the confines of committed partnerships (Armstrong, Hamilton, Armstrong, & Seeley, 2014; Crawford & Popp,

2003; Gilmartin, 2006; Hamilton & Armstrong, 2009). As a result, women who forgo these cultural norms are ‘slut-shamed’—the women are berated for presumed sexual conduct (Armstrong et al., 2014).

Several studies have shown that hookup culture is not completely free of sexual double standards (Allison & Risman, 2013; Bogle, 2008; England & Bearak, 2014; Hamilton & Armstrong, 2009). For illustration, a recent study found that men are more judgmental toward women than toward other men who hookup, whereas women are more likely to report feeling disrespected because they hooked up with someone. Further, women under-report intercourse and fellatio during hookups as well as their own initiation of sexual activity during hookups (England & Bearak, 2014). These findings suggest women who participate in hookups face stigma for exercising their sexual agency and risk damage to their reputations, while men face little to no repercussions for their behavior.

Negative emotionality. While both genders attribute a variety of positive emotions to their hookup experiences, women are more likely to report negative emotions including regret, guilt, and shame (Eshbaugh & Gute, 2008; Fielder & Carey, 2010a; Glenn & Marquardt, 2001; Grello et al., 2006; Owen & Fincham, 2011; Paul & Hayes, 2002; Paul et al., 2000). Evolutionary psychologists propose that emotions play a critical role in human sexual and mating strategy. Proponents of this viewpoint argue women desire long-term investments of time and resources from their partners (Buss, 1998; Buss & Schmitt, 1993; Garcia et al., 2012; Reiber & Garcia, 2010; Townsend & Wasserman, 2011). Thus, women may be conflicted when participating in sexual relationships devoid

of emotional investments despite their acceptance of hookup culture and sexually permissive behavior (Townsend & Wasserman, 2011). Garcia and Reiber (2008) found equal percentages of men and women endorsed sexual gratification (90% of men and 88% of women) as their motivation for hooking up. However, 42% of women compared to 29% of men reported a traditional romantic relationship as an ideal outcome after a hookup while 32% of men versus 17% of women reported further hookups as an ideal outcome (Garcia & Reiber, 2008).

Some women may feel slighted if their romantic expectations are not met following hookup partnerships. A qualitative study revealed that, for women, “not knowing their partner and the lack of further contact with the partner seemed to compound their regret and anger at themselves” (p. 655). Conversely, the notion of regret for men centered on the disappointment of a bad selection of hookup partner (e.g. she was unattractive or had a reputation for promiscuity) (Paul & Hayes, 2002). Similarly, Owen and colleagues (2010) found nearly 48% of women surveyed reported negative emotional reactions (i.e. empty, confused) following hookups as opposed to 26% of men who reported similar reactions. The researchers attributed these feelings to a potential mismatch in hookup expectations and a lack of communication about the meaning of the encounter.

Hookups and other casual sexual behaviors are common among women and emotional reactions do not always reflect evolutionary psychology approaches or theories. The intersections of biology, psychology, and cultural and social norms also shape hookup behavior and subsequent emotional reactions. Evidence suggests

psychosocial factors such as family environment (Johnson, 2013; Shukusky & Wade, 2012), attachment style (Owen et al., 2010; Snapp, Lento, Ryu, & Rosen, 2014), and alcohol use (LaBrie, Hummer, Ghaidarov, Lac, & Kenney, 2014; Lewis et al., 2012) play a role in both genders' hookup experience and their emotional reactions afterward.

Despite documented gender differences in hookup expectations and emotional reactions, hookups are often depicted as commitment-free, "no strings attached" encounters. Consequently, it is assumed both parties have a mutual understanding of the expectations and outcomes of the sexual relationship. Instead, the studies suggest both women and men may view hookups as potential avenues for establishing romantic partnerships. It is possible college students' attitudes and feelings toward hookups, and subsequent hookup partners and sexual behaviors, are predicated on students' romantic desires and intentions.

STI risk. Women who participate in hookups may also be at increased risk for STIs and HIV (Downing-Matibag & Geisinger, 2009), as penetrative hookups involving unprotected vaginal sex present a heightened risk to women compared to men.

Biologically, women are more susceptible to STIs and HIV due to the anatomy and physiology of the vagina which makes viral and bacterial transmission more efficient (Dworkin, 2005; McCree & Rompalo, 2007; Moench, Chipato, & Padian, 2001). This risk is exacerbated by inconsistent condom use. Per the American College Health Association's National College Health Assessment II (2014), 62% of sexually active female students reported using condoms during their last vaginal sex episode, compared to 69% of male students. Further, condom use frequency among college women

decreases over time in both casual and romantic heterosexual partnerships (Walsh, Fielder, Carey, & Carey, 2013). This is partially explained by increases over time in hormonal contraceptive use, which protects against pregnancy but not STIs (Jones, Mosher, & Daniels, 2012). These findings reflect current national STI trends in which women outpace men in chlamydia and gonorrhea infections (Centers for Disease Control and Prevention, 2016).

Racial Differences in Hooking Up

Hookups are profoundly gendered experiences that could prove disadvantageous or beneficial for women. The gendered nature of hookups and the collective experiences of women within these sexual partnerships give context to the sexual risks and benefits women face on college campuses. However, gender differences provide an incomplete picture; other social identities, such as race, shape students' sexual partnering and behaviors. This may be particularly true for women who also hold racial minority status, such as Black women. Thus, the role of race in hookup experiences must be considered.

The little that is known about Black college women's hookup experiences is gleaned from a small body of disjointed studies that have included black participants. However, several assumptions regarding racial differences in hooking up have risen from these studies. Further research is certainly warranted, yet these studies provide a useful starting point for understanding this population's sexual behaviors within the context of hookup culture. Specifically, research has shed some light on racial differences in definitions, attitudes toward hookups, hookup participation, and sexual partnering.

Definitions. The word ‘hookup’ is an ambiguous term that is defined and conceptualized differently among researchers and college students. Despite these general differences, the literature suggests Black college students conceptualize and define hookups differently than their white counterparts. In their seminal article, Paul and colleagues (2000) defined “hookups” as “sexual encounter[s] which may or may not include sexual intercourse, usually occurring on only one occasion between two people who are strangers or brief acquaintances.” However, Black students in the study reported less anonymity in their casual sex partnerships and perceived sexual encounters with acquaintances as more common than with strangers (Paul et al., 2000). Further, Black students viewed hooking up as a step in relationship formation rather than a discrete sexual experience (Paul et al., 2000). Glenn and Marquardt (2001) also found differences in how Black and White students define hookups. While hookups had a clear sexual connotation among White students, Black students reported hookups implied ‘meeting up’ with someone or going out on a date. On the other hand, Bogle (2008) did not report racial differences in how ‘hookup’ is defined as students generally understood what the term meant. Instead, the researcher implied that ‘hookup’ is a term used predominantly by White students.

Attitudes. It is believed that Black college student have more positive attitudes toward hooking up than their white counterparts. Previous studies of adolescents and young adults found associations between identifying as Black and holding positive views of sex (Cuffee, Hallfors, & Waller, 2007; Sprecher, Treger, & Sakaluk, 2013; Weinberg & Williams, 1988). For example, Davidson and colleagues (2008) found that Black

college students were more approving of premarital sex than their white counterparts. Particularly, Black women were more likely to approve of premarital sex with casual, occasional, and regular dating partners than Black men. Specific to hookups, a study assessing sexual attitudes toward hooking up revealed Black men held more liberal sexual attitudes than White men and were less to lose respect for those who hook up (Allison & Risman, 2013). The current literature supports racial differences in hookup attitudes; however, there is some evidence suggesting intra-racial gender differences. In a study of hookup and romantic partnering among undergraduate students, McClintock (2010) found Black students were the only racial group in which women expressed significantly greater agreement with the statement “I wish there were more opportunities for going on dates” and the men expressed significantly greater agreement with the statement “Any kind of sexual activity is okay as long as both persons freely agree to it” (pg. 67).

Participation. Considering research detailing Black students’ positive attitudes toward sex, studies investigating racial differences in hookup participation have presented conflicting results. One could expect that Black students’ sexual attitudes would indicate greater participation in hookups; however, this assumption may not reflect the reality of Black students. Both Bogle (2008) and Owen et al. (2010) found that Black students are less likely to hookup than their White counterparts. On the other hand, Berntson et al. (2013) found that non-white students were 2.87 times more likely to participate in a hookup than white students. Some researchers have found no racial differences in hookup participation. Brimeyer and Smith’s (2012) findings suggest that

race is not a significant predictor in hooking up among college students. Fielder and colleagues (2013) also found no consistent pattern when it came to hooking up and race/ethnicity in a study of first year college women.

Homophily. Although Black students exhibit a strong bias toward racial homophily, Bogle (2008) argued the racial composition of a campus is an important factor in hooking up, as students are more likely to hookup if they are around peers of similar racial backgrounds. This is may be particularly true on PWI campuses. Allison and Risman (2014) found that racial homophily is ingrained in friendships and organizational affiliations of students of color. Consequently, these intra-racial social interactions affect hookup participation among students of color by reducing their potential partners. McClintock (2010) corroborates this argument in her study of Stanford University undergraduates where despite Black students' close physical proximity to non-Black students on the predominately white campus, Black students in general (especially Black women) were less likely to participate in interracial hookups. However, the researcher also notes there are intra-racial gender differences in hookup participation. McClintock found that Black men were significantly more likely to hookup than Black women.

Definitive data regarding Black students' positioning in hookup culture cannot be ascertained from the current body of literature; however, the research on racial differences in hookup experiences among college students adds another dimension to our understanding of sexual health among Black women on college campuses. Investigations into racial differences help elucidate the hookup behaviors exhibited by Black students

and the context in which they take place. However, race alone does not capture the gendered nuances experienced by Black women. Like gender, race is but one social identity that Black women embody.

Rationale

The emergence of hookup culture has challenged our understanding of sex and sexuality among college students and has subsequently pushed research efforts to examine the potential risks and benefits of hookup participation. However, hookup research has largely remained White and often not reflective of the sexual experiences of historically marginalized populations, such as Black women. Several researchers have noted the lack of racial/ethnic diversity in study samples (Allison & Risman, 2014; Barriger & Vélez-Blasini, 2013; Kenney et al., 2013; Paul et al., 2000); yet very few studies have explored hookup culture specifically among Black women, or Black students in general. In contrast, gender differences in hookup participation is explored extensively in the current body of literature. Both social constructs merit further investigation; nevertheless, Black women do not experience race and gender separately. They are both Black and women simultaneously. For this reason, hookup research should reflect the complex interplay between race and gender and its influence on college students' hookup experiences.

Employing an intersectional approach, researchers can critically examine the mutually constitutive roles race and gender play in shaping college students' sexual practices. Intersectionality pushes researchers to conceptualize and analyze the influence of social structures and identities on sexual health in a myriad of ways that reflect the

complex existences of populations under study. Further, the centering of historically marginalized groups in sexual health research can inform and facilitate the development well-informed, culturally competent health promotion messages, interventions, and policies. These processes are particularly invaluable when examining the hookup practices of Black college women.

Black women share a history of racial oppression with Black men and an understanding of gender discrimination experienced by White women; however, it is the combined influence of racism and sexism that shapes their worldviews, identities, and perspectives (Crenshaw, 1989; Stewart & McDermott, 2004; T. Townsend, 2008). On account of being female, Black, and college students, Black college women face multiple behavioral and social risk factors related to HIV and STI acquisition (Alleyne, 2008). Similar to general college populations, Black women's risk is shaped by several behavioral and development factors such as multiple/concurrent partnerships, inconsistent condom use, feelings of invincibility, and low risk perception (J. Dworkin, 2005; Paul & White, 1990; Stinson, 2010). At the same time, the social factors common to women and Blacks (e.g. mass incarceration (Davis & Tucker-Brown, 2013), poverty (Kaiser Family Foundation, 2014a, 2014b), gender-ratio imbalances (Newsome et al., 2014), and power disparities (Collins, 2000) also shape their risk. Thus, considering the high percentage of students reporting a hookup experience and the possible sexual risks posed by these encounters, more hookup research inclusive of Black women is needed.

CHAPTER III

RESEARCH DESIGN AND METHODS

Conceptual Framework

Considering the relevant literature and theoretical discussion, Intersectionality is the framework undergirding this study. Based on the tenets of Intersectionality, I expected students embodying multiple marginalized identities (e.g., Black identity and cisgender women) to have disparate outcomes and perspectives than those embodying privileged identities (e.g. White identity and cisgender men). Black women, in particular, embody two marginalized identities that simultaneously influence their sexual attitudes, practices, risk behaviors, and subsequent experiences in ways that are distinct from White men and women and Black men.

Although structural level factors were not directly examined in this study, the social structures of racism and sexism give meaning to the racial and gender identities embodied by the college students. These factors produce and maintain social inequality and power disparities, which in turn can influence health behaviors and outcomes. Figure 1 graphically depicts the hypothesized relationships between the variables under study.

Research Design

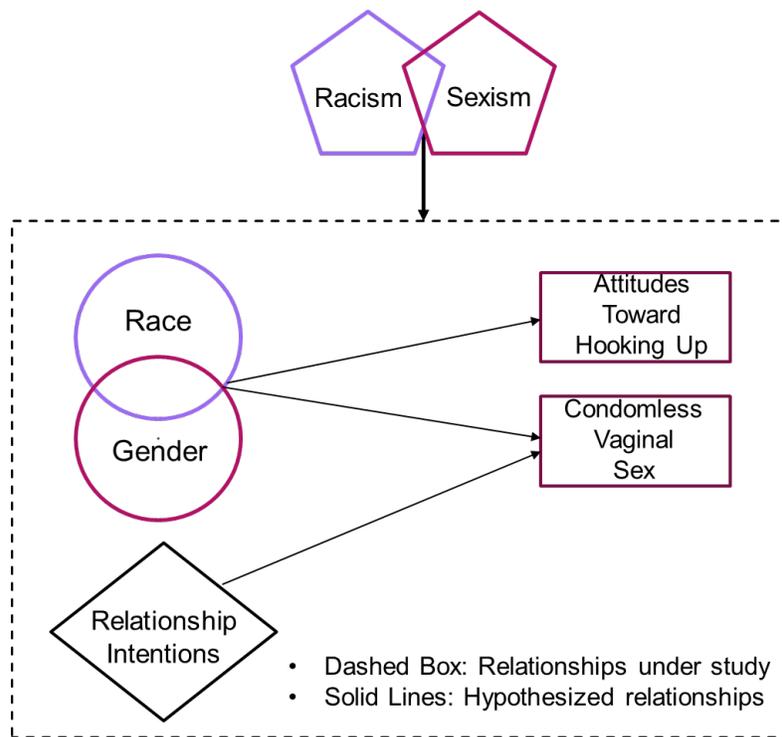
I used a mixed method design in this study. In general, mixed methods designs are research procedures in which both quantitative and qualitative data are collected, analyzed, and integrated within a single study for the purpose of understanding a research

problem more completely (Tashakkori & Creswell, 2007). Mixed methods designs enable researchers to draw upon the strengths of both quantitative and qualitative methods while minimizing the weaknesses associated with each method when applied independently (R. Johnson & Onwuegbuzie, 2004). Thus, researchers employing these methods often subscribe to pragmatic assumptions of knowledge acquisition (Creswell & Plano Clark, 2011). Per these assumptions, quantitative and qualitative methods are not incompatible or adversarial. Instead, methods are chosen according to the research questions to be answered (Muijs, 2010). Diverse approaches and both subjective— inquiry based on experience and perception—and objective— inquiry based on observation— knowledge are valid and valued under this paradigm (Creswell & Plano Clark, 2011).

In addition to pragmatic approaches, some mixed methods researchers employ transformative-emancipatory frameworks in their research (Creswell & Plano Clark, 2011). Transformative-emancipatory frameworks emphasize the role of values in research (Mertens, 2003). Researchers adhering to transformative-emancipatory assumptions for knowledge acquisition recommend “the adoption of an explicit goal of research to serve the ends of creating a more just and democratic society” (Mertens, 2003, p. 159). As a result, the lives and experiences of marginalized and oppressed groups are centered, as researchers seek ways to ameliorate the effects of oppression and discrimination through the production of research that is sensitive to the lived experiences of the marginalized and promotes diversity in knowledge production.

Accordingly, I used a transformative sequential design. The transformative sequential design has a clear theoretical perspective and framework that guides the execution of the study. As stated previously, transformative frameworks center research that is change oriented and advances social justice causes through the identification of power disparities and the empowerment of traditionally marginalized individuals and/or communities (Mertens, 2007, 2012). Specifically, I used Intersectionality as a guiding framework for this study. Thus, the purpose of the transformative sequential design in this study was to elucidate issues of privilege and inequality among individuals and groups studied in hookup research (quantitative data) and give voice to those marginalized by these issues (qualitative data) (Hodgkin, 2008).

Figure 3.1 Conceptual Model of Hypothesized Relationships Between Variables



Researchers undertaking mixed methods studies must consider four key factors relevant to research design: implementation, priority, interaction, and integration (Creswell & Plano Clark, 2011; Creswell, Plano Clark, Gutmann, & Hanson, 2003). Implementation is the timing, sequence, or order of the methods in the research study. Priority refers to the relative importance or weight given to the quantitative and qualitative methods in the study. Interaction is the extent to which each method informs each other or is kept independent. Finally, integration is the stage of the research process where the quantitative and qualitative phases are mixed— explicit interrelating or mixing of the study’s quantitative and qualitative strands (Creswell & Plano Clark, 2011; Creswell et al., 2003).

In this study, the transformative sequential design was implemented in two distinct phases: a quantitative phase followed by a qualitative phase. In the first phase, I conducted a secondary analysis of data collected from the Online College Social Life Survey (OCSLS) (see Figure 1). The second phase of the design involved primary data collection and analysis of focus group data collected from Black college women. In this design, I gave priority to the quantitative phase because the OCSLS’ sample size and relative diversity of participants allowed me to simultaneously examine multiple social identities (e.g. race and gender) and the intersectional differences that exist between them concerning hookup attitudes and behavior among college students. The qualitative phase that followed was used to lend context and insight to the quantitative findings which allowed me to explore issues in an understudied area of hookup research: Black college women’s attitudes toward and perceptions of hooking up. It must be noted that the timing

between the two phases was brief considering the secondary analysis technique used in the quantitative portion.

There was a high level of interaction between the two phases. The results of the quantitative phase were used to develop and refine focus groups questions and provide an overall analytic direction for the qualitative phase. In turn, results from the qualitative phase added context to the quantitative findings as well as provided direction for future research investigating Black women's sexual behavior within the context of hookup culture. The results from both phases were triangulated, compared, and synthesized to produce conclusions and inferences that reflected what was learned during the analysis of both quantitative and qualitative data (Creswell & Plano Clark, 2011; Teddlie & Tashakkori, 2009).

Although each phase informed the other, there was a fair amount of independence in both phases—different populations and analytic foci were used in each phase. In the quantitative phase, I used a sample of Black and White college students from the OCSLS to explore racial and gender differences in hookup attitudes and behaviors. However, I used a sample of Black college women to explore Black women's attitudes toward and perceptions of hookup culture in the qualitative phase. The sample of Black women in the qualitative phase was not drawn from OCSLS. In traditional sequential designs, researchers purposely select participants from the larger sample used in the quantitative phase to explore key findings in depth. This sampling approach was not used in this design because the quantitative phase involves secondary data analysis of the OCSLS that was conducted between 2005 and 2011. Thus, it was unfeasible to sample from OCSLS

participants. Finally, the two methods were integrated within the theoretical framework and in the data interpretation stage of the study. The analytic methods utilized in the two phases are expounded upon in the following sections.

Phase 1 Methods: Quantitative

Research Questions

The quantitative phase of the study addressed the following research questions and hypotheses:

R1. What is the association between the intersection of race and gender and attitudes toward hookups?

- **H1 a.** There will be significant differences in reported hookup attitudes among Black women and their gender and racial counterparts. Black women will report more positive attitudes toward hooking up than White women. Black women will report more negative attitudes toward hooking up than White and Black men.

R2. What is the association between pre-hookup relationship intentions, race, gender and condom use during last vaginal hookup encounter?

- **H2 a.** There will be a significant association between pre-hookup relationship intentions and condom use during last vaginal hookup encounter. Students desiring a relationship with their most recent hookup partner will be more likely to report condomless vaginal sex than those who did not desire a relationship or were unsure of their relationship desires.
- **H2 b.** There will be significant differences in condom use reported during last hookup encounter among Black women and their gender and racial counterparts.

Black women will more likely report condomless sex during last their hookup than White men and women. Black men will more likely report condomless sex during their last hookup than Black women.

- **H2 c.** Black and White women desiring a relationship prior to their most recent hookup will be more likely to report condomless sex. Black and White men desiring a relationship prior to their most recent hookup will be less likely to report condomless sex.

Data Sources

The Online College Social Life Survey. This phase of analysis used the Online College Social Life Survey (OCSLS), conducted between 2005 and 2011. The 15 to 20 minute online survey was administered to 24,131 college students at 22 colleges and universities in the US (Armstrong, England, & Fogarty, 2012). For a list of participating institutions, see Appendix A. Survey recruitment was done through convenience sampling in undergraduate courses—primarily in large introductory-level sociology courses—at participating institutions (Armstrong et al., 2012). Participation in the survey was voluntary. Instructors offered students course credit for completing the survey or an alternative assignment for those electing not to participate. The response rate was 99 to 100 percent in most classes. Although recruitment was done largely in sociology courses, only 11 percent of the sample were sociology majors (Armstrong et al., 2012). The large sample size and diversity of participating schools renders the OCSLS an invaluable resource, as it is the largest survey to my knowledge to explore hookup behaviors among college students across the US. Prior to this survey, studies of college student hookup

behavior were campus-specific and limited in their scope of hookup practices among students. The OCSLS provides details about specific coital and non-coital hookup behaviors, attitudes, sexually coercive hookups, and partner demographics, among others. In turn, several researchers have used the OCSLS to draw conclusions about sexual behaviors, sexual satisfaction, sexual victimization, and sexual double standards.

Considering the large sample size, the sample was not representative of US college students for several reasons. First, participants were selected using convenience-sampling methods as opposed to random sampling methods. Second, while the survey included institutions from each region of the US—Northeast (n= 6; 27.3%), South (n= 2; 9.1%), Midwest (n= 4; 18.2%), and West (n= 10; 45.5%), the sample does not reflect actual undergraduate student enrollments by region (See appendix B). Specifically, the Southern region is underrepresented. Nearly 35% of US undergraduates were enrolled in post-secondary degree granting institutions in the Southern region during Fall 2011 (Snyder & Dillow, 2015). Students enrolled in institutions in the Southern region only account for 2.3% of the OCSLS sample. Third, considering the purpose of this intersectional study, Black students are underrepresented. Black students made up nearly 14% of the total US undergraduate population between 2005 and 2011 (Snyder & Dillow, 2015), yet they account for only 6.5% the OCSLS sample. Finally, the sample lacks representation of students from Historically Black Colleges and Universities (HBCUs), as none of these institutions participated in the survey.

Nevertheless, the OCSLS data provided a high level of detail on hookup attitudes and behaviors among US college students. Thus, the large sample size and variety of

participating institutions allowed me to capture the hookup attitudes, reported number of hookup partners, and sexual behaviors of a sizable and diverse cross-section of US college students. Further, some of the limitations found in the dataset were explored in the qualitative phase of the study.

Note About Social Desirability Bias

As the case with many surveys assessing socially sensitive topics and behaviors, the OCSLS data likely reflect some degree of social desirability bias. Social desirability bias occurs when survey participants provide inaccurate answers to questions in order to portray themselves in a more positive or favorable light (Dillman, Smyth, & Christian, 2014). This form of response bias can result in measurement error, or the difference between the estimates produced using survey data and the true value of the variables because respondents gave inaccurate answers to survey questions (Dillman et al., 2014). Several techniques are recommended to reduce the bias in surveys (e.g. indirect questioning, question ordering, forgiving wording) (Tourangeau & Ting Yan, 2007). However, given that I am conducting a secondary analysis, these methods cannot be used to correct for any response bias found in the survey. Thus, any results must be considered in light of this limitation.

Study Sample

Given the analytic focus on race, gender, and heterosexual relations among undergraduates, the sample included students who meet the following criteria: (1) self-reported racial identity of Black or White; (2) non-Hispanic ethnicity; (3) self-reported

sexual orientation of heterosexual; and (4) opposite sex encounter at last reported hookup; (5) 18 to 24-years-old; and (6) undergraduate status.

Exclusion rationale. The eight year period between 18 to 25 years old, termed *emerging adulthood*, is a developmental stage in which individuals explore their social and sexual worlds and selves (Arnett, 2000). While over 70% of US college students are 25 years or younger (Snyder & Dillow, 2015), the OCSLS groups all participants over 24 years old into a “25+” category. Because it is possible that many of the 1,457 participants in this category were 26 years or older, only those who were 24 years or younger were included in the study sample.

Transgender students were excluded from the sample as well for several reasons. First, transgender students accounted for only 1% (n=36) of the survey participants. Second, due to the marginalization and stigma faced by this group, the lack of research examining transgender college students’ sexual practices, and their small numbers in the OCSLS, an analysis of their sexual attitudes, partners, and behaviors was inappropriate. Extensive primary data collection and literature reviews would be necessary to make any inferences regarding this groups’ hookup participation, all of which were beyond the scope of this study.

Study Measures

Independent variables.

Race. Participants were asked, “If you had to pick one racial or ethnic group to describe yourself, which would it be?” Response options included 14 racial and ethnic

categories. Only participants responding as White or Black/African American were included in the study sample. Race was transformed into a dichotomous variable (Black/White).

Gender. Participants were asked, “Which sex are you?” Response options included four categories: Male, Female, Transgender (male to female), and Transgender (female to male). Only participants indicating male or female were included in the study sample. Thus, gender was dichotomized (male/female).

Outcome variables.

Attitudes toward hookups. Survey participants responded to 21 Likert items regarding their attitudes toward dating, exclusive relationships, hookups, and gender roles. From these 21 items, 13 regarding hookup were chosen for this outcome variable. The chosen items are as follows: (1) “Any kind of sexual activity is okay as long as both persons freely agree to it”; (2) “I would not have sex with someone unless I was in love with them”; (3) “If women hook up or have sex with lots of people, I respect them less”; (4) “My religious beliefs have shaped and guided my sexual behavior”; (5) “If someone has hooked up a lot, I’m less interested in this person as a potential girl/boyfriend”; (6) “I wish there were more opportunities for hooking up at my school”; (7) “I don’t really want to be in an exclusive relationship now because I’d rather be free to date or hook up with multiple people”; (8) “If men hook up or have sex with lots of people, I respect them less”; (9) “I wish there were more opportunities for going on dates before a relationship is established at my school”; (10) “I wish there were more opportunities for finding someone to have a relationship with at my school”; (11) “One disadvantage of being in

an exclusive relationship in college is that it might interfere with moving to another city for a job or graduate school when I graduate”; (12) “One advantage of being in an exclusive relationship is that you have someone to talk to and get love and emotional support from”; and (13) “One advantage of being in an exclusive relationship is that you have someone to have sex with on a regular basis”. The response options for each item were: strongly agree, agree, disagree, and strongly disagree. Items 1, 6, and 7 were reverse coded to reflect congruence with other Likert items.

Based on these items, I created a scale that measured hookup attitudes by way of exploratory factor analysis using principal components. Factor analysis is a useful data reduction tool for assessing relationships among a large number of multiple variables in order to investigate underlying constructs that might be represented by the set of variables (Yong & Pearce, 2013). A factor analysis identifies clusters of inter-correlated variables (factors) that measure underlying constructs. principal component analysis is another data reduction tool that reduces a large set of observed variables into smaller variables (principal components) which account for most of the variance among the observed variables (Suhr, 2005).

I used a similar process to construct a scale from the 13 Likert items. First, I examined the relationship between the 13 variables using a correlation matrix to assess the clustering of variables. Next, I ran a principal component analysis to determine the proportion of each variable’s variance that can be explained by the principle components. I accomplished this by examining the resulting Eigenvalues. Eigenvalues are useful in determining which components are meaningful and should be retained. However, before I

retained or eliminated items with low Eigenvalues from the scale, I calculated a Cronbach's alpha to test for reliability. Decisions regarding the removal, or retention, of variables were made following the reliability analysis. Once I had a reliable scale, all items were transformed into a single composite, continuous variable called *Attitude toward hooking up*.

Hookup behaviors. Participants were asked the following question regarding their most recent hookup: "Which sexual behaviors did you engage in (check all that occurred)?" A list of 14 sexual acts was provided for selection. Immediately after the list of sex acts, students were asked, "Did you use a condom?" The response options were 'Yes' and 'No'. For the purposes of this study, only two items referencing vaginal sex were considered. The two items referencing vaginal sex and the question regarding condom use were combined into a composite, dichotomous variable called *condom use during last vaginal hookup*.

Pre-hookup relationship intentions. Participants were asked the following question about their last hookup partner: "Were you interested in having a romantic relationship with the person you hooked up with before you hooked up?" The response options for this item included: (1) "No, I wasn't at all interested", (2) "Possibly; I didn't really know yet", (3) "Maybe; it had some appeal", and (4) "Yes, I was definitely interested". This item was transformed into a categorical variable — Pre-hookup relationship intention—in which response options 2 and 3 from the original question were collapsed resulting in three possible response options representing no interest, possible interest, and definite interest.

Control variables. Based on prior literature, the following individual- and institutional-level variables were controlled for: (1) *age of student*; (2) *age at first vaginal intercourse*; (3) *undergraduate classification status*; (4) *student religious affiliation*; (5) *fraternity/sorority membership*; (6) *student athlete status*; and (7) *student residence*.

Please see Appendix C for a list of all variables.

Analysis Plan

All statistical analyses were conducted using the Statistical Package for Social Sciences software (SPSS), version 22 (IBM, 2013). Prior to the analyses, I screened the data for missing values and decisions regarding deletions or imputations followed. I also assessed the data for outliers that could potentially skew results. Descriptive/univariate analyses were used to examine the characteristics of the participating institutions and frequencies were calculated for each variable as well as measures of central tendency and variability. Tests for normality were only conducted on the *attitudes toward hookups* variable. All other independent and outcome variables were nominal and did not require such analyses. Descriptive/univariate analyses were used to examine the characteristics of the Black and White college student population. Frequencies were calculated for each variable as well as measures of central tendency and variability.

R1. 1. What is the association between the intersection of race and gender and attitudes toward hookups?

Before analyses were conducted, I understood that students surveyed for the OCSLS were not chosen at random and were clustered within 22 institutions. It is assumed that students attending the same institution are likely similar in their attitudes

toward hooking up, reported number of hookup partners, and sexual risk behaviors. Thus, observations are not necessarily independent and are likely influenced by the college or university the student attends. The nesting of students within the colleges and universities were considered to make correct inferences regarding the influence of race and gender on the outcome variables under investigation. To accomplish this, a random intercept model was used. This model not only assessed the effect of race and gender on the outcome variables, but also assessed how much of an effect the institutions themselves had on the outcome variables. Thus, different intercepts were estimated for each institution in each of the analytical models.

Multiple regression models were used to examine the association between race and gender and attitudes toward hooking up. Control variables were added and held constant in each regression model. The main effects of race and gender were examined in each regression model. Also, a two-way interaction term (race \times gender) was added to each model to examine the multiplicative effect of race and gender on attitudes toward hooking up.

R2. What is the association between pre-hookup relationship intentions, race, gender and condom use during last vaginal hookup encounter?

Multiple logistic regression models were used to examine the association between pre-hookup relationship intentions, race, gender, and condom use during last vaginal hookup encounter. Control variables were added and held constant in each regression model. The main effects of pre-hookup relationship intentions, race, and gender were examined in each regression model. Also, the following two-way interactions were added

to the regression model: (race × pre-hookup relationship intentions), (gender × pre-hookup relationship intentions), and (race × gender). Finally, a three-way interaction term was added to the model (race × gender × pre-hookup relationship intentions).

Phase 2 Methods: Qualitative

The OCSLS offered an effective means for studying a large national sample of college students, testing hypotheses about hookup-related phenomena, and generalizing results to a broad population. Specifically, the intersecting influence of race and gender on attitudes toward hooking up and sexual risk behaviors can be quantitatively assessed for statistical significance, which offers insight to how racial and gender groups differ in their hookup participation and the extent of their sexual risk behavior (R. Johnson & Onwuegbuzie, 2004). However, the OCSLS lacked depth and a clear definition of ‘hookups’, which is necessary to understand Black women’s nuanced perspectives of and attitudes toward hookup culture on their campuses and the nature of these casual sexual partnerships. Thus, qualitative methods are better suited for investigating hookup culture through the descriptions, perspectives, and language of Black women. The qualitative phase allowed me to focus on and explore Black college women’s experiences and perceptions without comparison to other gender and racial groups. The centering of Black women’s experiences contextualizes my understandings of the associations and subgroup differences found in the quantitative analysis.

Central and Sub-Questions

- What are Black college women’s perceptions of and attitudes toward romantic and casual sexual partnerships on college campuses?

- How do Black women describe racial and gender differences in sexual partnering?

Descriptive Qualitative Design

I used a descriptive qualitative design in the second phase of the study. According to Lambert and colleagues (2012), qualitative description (QD) is a comprehensive summarization, in everyday terms, of specific events experienced by individuals or groups of individuals. QD may have overtones of other qualitative approaches; however, the goal of QD is not theory development (grounded theory), interpretive meaning of an experience (phenomenology), or ‘thick description’ (ethnography). Instead, QD provides a rich, lucid account of participants’ experiences and processes that are embedded within the human context, yet digestible and easily understood by researchers and lay people alike (Sullivan-Bolyai, Bova, & Harper, 2005). Further, QD is particularly useful for understanding health-related social phenomena through the lens of understudied or marginalized populations. This attribute is particularly valuable to researchers seeking to develop new or refine current interventions and programs that address social and health disparities (Sullivan-Bolyai et al., 2005).

Focus Group Method

I used focus group interviews as the data collection method for this phase of the study. This method was chosen for several reasons. First, Black college women in hookup culture is a novel topic and a scant amount of literature regarding the subject exists. Focus groups are particularly well suited for exploring new research areas and helping researchers understand a community-level phenomenon (Stevens, 1996). Second,

focus groups allow participants to develop ideas collectively, bring forward their priorities and perspectives, and share their conceptualizations and terminology concerning the topic under study (DuBois, 1983; Smithson, 2008). Third, focus groups allow for the emergence of consonant and dissonant views and opinions among participants that can further enrich the data collected (Smithson, 2008). Fourth, this method can “give voice” to groups that are otherwise silenced or marginalized in the traditional research process (Morgan, 1997). Finally, focus groups have been used in prior research with Black college women regarding topics of sexuality and sexual behavior (Ferguson et al., 2006; Hall et al., 2014; Newsome et al., 2014; Thompson-Robinson et al., 2005; K. M. Williams, 2012).

It must be emphasized that topics regarding sexuality and sexual behavior are highly sensitive in nature and often warrant individual interviews. However, elucidating Black college women’s individual sexual experiences involving hookups was not the purpose of this project. Instead, I sought to explore and describe Black women’s attitudes toward and perceptions of hookup culture on their college campuses. Thus, focus groups allowed participants to share and discuss their perspectives about the topic of interest among a group of peers without divulging highly personal information about their specific sexual preferences and experiences.

Focus group method criteria. Morgan (1997) outlined four steps commonly used in designing studies utilizing focus groups. They are as follows: (1) select homogenous participants—preferably, strangers; (2) conduct structured interviews with high moderator involvement; (3) recruit 6 to 10 participants per group; and (4) conduct

three to five focus groups per project. However, these criteria are highly dependent upon the nature and scope of the project or study. Focus group studies have included acquaintances (D'Alonzo & Fischetti, 2008), as few as three participants in a group (Newsome et al., 2014), and as few as two groups (Newsome et al., 2014).

Study Sites

With Institutional Review Board (IRB) approval, I recruited participants from the University of North Carolina at Greensboro (UNCG).

Rationale for study site selection. I chose UNCG for three reasons. First, the university is in Guilford County, North Carolina, a county and state that are disproportionately impacted by the STI and HIV epidemics. North Carolina is one of nine Southern states—Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas—that together have the highest HIV and AIDS diagnosis rates in the nation (Reif, Safley, Wilson, & Whetten, 2016). Currently, the state ranks eighth among the 50 states in HIV diagnoses. North Carolina is also 10th in chlamydial infections and sixth in gonorrheal infections among the 50 states (CDC, 2013). Similarly, Guilford County ranked 10th and 11th among North Carolina's 100 counties in newly diagnosed gonorrhea and chlamydia rates in 2014, respectively (North Carolina HIV/STD Surveillance Unit, 2015). Between 2012-2014, the county also ranked sixth in newly diagnosed HIV infection average rates in the state (North Carolina HIV/STD Surveillance Unit, 2015).

While chlamydia, gonorrhea, and HIV infection rates in Guilford County are among the highest in the state, infection rates for Blacks are disproportionately higher

when compared to other racial and ethnic groups (Smith, Mroska, & Earle, 2015). Blacks in Guilford County account for 75% of new HIV cases, 64% of new chlamydia cases, and 73% of new gonorrhea cases (Smith et al., 2015). Further, young adults age 15-24 make up 71% and 60% of new chlamydia and gonorrhea cases, respectively, while young adults age 20-29 account for 38% of new HIV cases in the county. Guilford County women appear to be disproportionately impacted by STIs. Sixty-seven percent of new chlamydia cases and 55.4% of new gonorrhea cases are among women; however, this overrepresentation may be due higher rates of STI screening among women (Smith et al., 2015).

Second, UNCG is the largest 4-year, bachelor-granting institution in the north-central region of North Carolina—referred to as the Piedmont Triad. With a population of 1,640,717, the Piedmont Triad consists of four major cities (Burlington, Greensboro, High Point, and Winston-Salem) and 12 counties including Alamance, Davidson, Forsyth, Guilford, Randolph, and Rockingham (Piedmont Triad Regional Council, n.d.). Within this region are 13 Bachelor-degree granting institutions, and nine technical and community colleges. It is estimated that over 60,000 students are enrolled in the region's 13 Bachelor-degree granting institutions (Piedmont Triad Regional Council, n.d.).

Third, UNCG is considered the most racially/ethnically diverse campus among non-HBCUs within the predominately white University of North Carolina system which consists of 17 institutions, five of which are HBCUs (The University of North Carolina at Greensboro, 2013). Non-white students make up approximately 43% of the undergraduate population—Black students account for about 24% of the undergraduate

population. Female students represent approximately 66% of the undergraduate population (NCES, 2015b). Considering the sexual health disparities facing young Black women and the possible risks associated with penetrative hookups, participants from UNCG could provide unique insight and novel perspectives about Black women's sexual attitudes, experiences, and behaviors within hookup culture on college campuses.

Study Sample

This phase of the study utilized purposive, homogenous sampling to achieve a sample of participants who shared the same (or very similar) characteristics or traits with the purpose of describing the particular sample in depth (Patton, 2014). Homogenous sampling is typically used in focus group research as they usually involve bringing people of similar backgrounds and experiences together to participate in group interviews about a topic or issue affecting them (Patton, 2014). For the purposes of this qualitative phase, the sample included participants who meet the following criteria: (1) self-reported racial identity of Black; (2) non-Hispanic ethnic status; (3) female; (4) heterosexual; (5) full-time undergraduate student at a bachelor degree-granting institution; (6) 18 to 24 years-old; (7) in a least second year of matriculation; (8) unmarried; and (9) reasonably comfortable discussing sexual behavior. As previously stated, the focus group participants were not selected from the pool of OCSLS participants. The quantitative phase involves secondary data analysis of the OCSLS conducted between 2005 and 2011 and it was unfeasible to sample from OCSLS participants.

Data Collection

Results from the quantitative phase were used to inform, develop, and refine open-ended interview questions. The focus group questions are listed in Table 1.1. To assess the cultural appropriateness and clarity of questions, the questions were assessed by researchers with experience working with college women with similar characteristics as the study's target population. Revisions to the questions were made based upon feedback received and a focus group moderator guide was created. Further, a priori codes were developed based on the revised focus group questions. Codes included, but are not limited to, the following: (1) definitions of hookups, (2) negative attitudes toward hookups, (3) positive attitudes toward hookups, (4) perceptions of prevalence, (5) reasons peers hookup, (6) gender differences in hookups, and (7) racial differences in hookups.

Table 3.1 Example of Focus Group Questions

1. As Black women, what things would you say influence Black women's decisions to participate in casual sex relationships while in college?
2. As Black women, are there any double standards that impact how you or your peers behave sexually? If so, what are they?
3. Thinking on our conversation at this point, what are the possible benefits of participating in casual sex relationships?
4. What are some potential challenges when participating in casual sex relationships?

Recruitment. I posted Institutional Review Board-approved fliers in the common areas of university buildings. The fliers stated the eligibility criteria and my contact information for interested individuals. Campus email listservs were also used for recruitment. I also recruited in introductory, general education courses as well as public

health courses, with permission of course instructors. General education courses are typically required and attract students from various majors and classifications. This method of recruitment has been used in previous research and has yielded good response rates (Lewis, Mendenhall, Harwood, & Browne Hunt, 2013; Williams, 2012). I did not use snowball sampling as Morgan (1997) encourages homogeneous strangers as participants in focus groups; however, it was impossible to avoid participants who are acquaintances. When potential participants contacted me, a brief screening survey was given to confirm eligibility. Once I established the student's eligibility, I informed the student of the day and time of the focus group.

Due to limited resources (e.g. inadequate funding, availability of research assistants, time constraints), I aimed to conduct four, one-hour focus groups with six to eight participants in each group. (n=24-32). Focus groups were held on the campus of UNCG in a private meeting space. All selected participants were informed of the purpose and scope of the study as well as their rights as participants. Each participant was required to sign a written informed consent form prior to the start of the focus group in order to participate. A semi-structured interview guide was used in all focus groups. At the end of each focus group, participants were asked to complete a short demographic questionnaire about their age, year in school, number of sexual partners since enrolling in college, and current relationship status (single, dating, in committed relationship, in open relationship). All focus groups were audio recorded, transcribed, and de-identified. The resulting transcripts were uploaded to ATLAS.ti 7.0 (Friese, 2014) for data storage, coding, and theme development.

I, the primary researcher, moderated each focus group. I am a Black female doctoral student in Community Health Education with training in African American studies, sexual health education, and qualitative research methods. Each session also had an assistant moderator who recorded notes of the focus group discussions. The assistant moderator was Black female doctoral student in Community Health Education. The racial and gender matching of myself, the assistant moderator, and participants served as “methodological capital” (Gallagher, 2000; Hall et al., 2014). Here, methodological capital is understood as the value of the researcher’s Black female identity that can be leveraged to “build rapport, cooperation and trust, and to gain access to the ‘authentic’ views and experiences” of the study participants (Gunaratnam, 2003).

Data Analysis

Data analysis included the following steps outlined by Creswell and Plano Clark (2011) for qualitative studies. First, the researcher’s experiences with the topic under study (hookup culture) were described and bracketed—the intentional sidelining of one’s beliefs about the topic or knowledge about the subject prior to and throughout the investigation (Chan, Fung, & Chien, 2013). During this step, I considered my personal thoughts, attitudes, perceptions, and biases around hookup culture and casual sexual behavior. I also reflected on my intersecting identity as a Black woman, as well as my own personal experiences with hookup culture as an undergraduate student. My thoughts were written or audio-recorded prior to and after each focus group. Notes detailing my thoughts and biases were also written throughout the data analysis process.

In the second step, transcripts were read several times in their entirety to understand the focus group interviews and to identify major organizing ideas. The assistant moderator's notes were also reviewed. I wrote notes and memos describing key ideas, phrases, and concepts gleaned from each focus group discussion. For instance, language and phrases used by the women to describe hookups differed from those previously described in the literature. Using the a priori code "definitions of hookups", I documented any terms, phrases, or definitions the women used to describe casual sexual encounters outside the confines of dating or romantic relationships. Also, I identified major organizing ideas across all four focus groups as well as identify key concepts and ideas unique to each group. For example, I suspected that the women would identify similar racial and gender differences in hookup participation on their campus; however, may have a different perspective regarding these differences.

Third, a list of significant statements, sentences, and quotes that provided understanding of participants' perceptions of and attitudes toward hookup culture was compiled and coded—the process of organizing and aggregating text into small, descriptive categories—per the a priori codes established before data collection. The a priori codes allowed me to sift through statements that elucidated key concepts under investigation and undergirded the overarching story of the women's experiences. Although a priori codes were used to organize significant statements, I also analyzed the data for significant statements that diverge from the a priori coding structure. New codes were created to organize any emergent ideas and statements that do not align with the

a priori codes. The resulting codes were compared across all focus groups and aggregated into themes—broad units of information that form common ideas (Creswell & Plano Clark, 2011)

The fourth, and final step, involved a rich description of the participants' perceptions of and attitudes toward hookup culture on their college campuses. During this step, I pieced together the experiences described during the focus groups using an order that fit the data (e.g. chronologically by topic, by salience of topic, etc). I also attempted to “stay close to the data” without infusing my own interpretation of the women's attitudes and perceptions of hookup culture. In doing so, I invited outside researchers to review my descriptions to ensure they accurately reflect the women's perceptions of and attitudes toward hookup culture on college campuses as well as their conceptualizations of racial and gender differences in hookup participation.

Establishing Trustworthiness

Lincoln and Guba (1985) offer four criteria for establishing the trustworthiness of a qualitative study: (1) credibility, (2) transferability, (3) dependability, and (4) confirmability. These steps are used to establish the believability and authenticity of qualitative research rather than the traditional validity and reliability measures found in quantitative research. In this study, I established credibility through the triangulation of the findings with the results from the quantitative phase and previous studies; this step was also used to establish confirmability. Member checks—feedback from participants on the accuracy of the initial interpretations of the moderator—was done at the end of each focus group to establish credibility. Rich description of the participants' perceptions

and attitudes was provided to establish transferability. Finally, dependability was established through peer review and debriefing by external reviewers. These researchers—with experience in African American studies, women’s health, and sexual and reproductive health—will oversee the research process and interrogate the study findings.

Integration of Study Phases

The integration, or mixing, of the quantitative and qualitative phases of the study occurred at two points: within the theoretical framework and during data interpretation.

Integration Within a Theoretical Framework

Proponents of transformative mixed methods designs suggest researchers use their theoretical frameworks, and the framework’s core assumptions, to guide all decisions about how the study is designed and implemented (Caracelli & Greene, 1997; Creswell & Plano Clark, 2011; Mertens, 2003; Sweetman, Badiee, & Creswell, 2010). In this study, Intersectionality was the overarching theoretical framework. Under this framework, it was assumed that students’ experiences with hookup culture are impacted by the intersecting social identities they embody and the broader social structures that give these identities meaning. Further, those who embody multiple marginalized identities (e.g. Black women) must contend with the interlocking systems of oppression (e.g. racism and sexism) within hookup culture, which may place them at increased risk for deleterious sexual health outcomes or sexual stigma associated with hookup participation. These assumptions shaped all aspects of the transformative sequential design (i.e. research questions, quantitative and qualitative methods, and data interpretation) which was

chosen to include, center, and differentiate the experiences and perspectives of Black women who traditionally have different access to power in the sexual domain. To better understand and challenge assumptions about Black women's sexual attitudes and behavior within hookup culture, the I used the OCSLS quantitatively to assess the influence of the intersection of race and gender on hookup attitudes and condom use during last vaginal hookup. I used focus group interviews to explore the nuances of Black women's attitudes and perspectives regarding the hookup culture on their campuses.

Integration During Data Interpretation

The quantitative and qualitative strands were also integrated during the final stage of the study after all data were collected and analyzed. During this stage, I compared and synthesized the results from each strand to draw conclusions or make inferences regarding Black college women's hookup attitudes and behaviors as well as their attitudes toward and perceptions of hookup culture on their campus. Specifically, I considered how the focus group results concurred with, or differed from, the quantitative findings. I also made inferences about the intersection and interaction of race and gender and their influence on Black women's attitudes toward hooking up and condom use during last vaginal hookup as well as their perceptions of hookup culture on their college campus.

CHAPTER IV

**DEVELOPMENT AND INITIAL VALIDATION OF THE
ATTITUDES TOWARD HOOKING UP SCALE**

Introduction

Cultural attitudes toward premarital and casual sex have become more permissive since the sexual revolution in the 1960s, particularly among college students (Stinson, 2010). The rise of liberal sexual attitudes has supplanted traditional notions of chastity, courtship, and marriage among young adults and has facilitated the emergence of hookup culture—the collective attitudes, behaviors, and beliefs that support and promote casual sex behavior and sexual pleasure sans the expectation of long-term commitment and/or monogamy (Bogle, 2007; Garcia et al., 2012). Accordingly, hooking up—which can include coital and/or non-coital behaviors—is a fairly common practice among contemporary US college students with 60 to 80% reporting at least one hookup experience during their college years (Bogle, 2008; Calzo, 2013; Fielder & Carey, 2010a; Garcia et al., 2012; Lambert et al., 2003; Paul & Hayes, 2002; Paul et al., 2000). The high prevalence of hookups among college students lend credence to researchers' conceptualizations of college campuses as open markets for sexual partnerships (Stinson, 2010; Uecker & Regnerus, 2010). Students have access to potential sexual partners and are free to experiment with their burgeoning sexualities without relational commitment and parental and institutional oversight (Bogle, 2007, 2008; Stinson, 2010). Considering

this, researchers believe the rise of hookup culture is indicative of a continued shift toward liberalism in college students' attitudes toward sex and sexuality.

Understanding this shift in students' sexual attitudes is imperative as several studies acknowledge the role of sexual attitudes on casual sexual behavior (Byno, Mullis, & Mullis, 2009; Katz & Schneider, 2013; Manning, Longmore, & Giordano, 2005; Owen et al., 2010; Townsend & Wasserman, 2011). Katz and colleagues (2013) found that permissive sexual attitudes are positive predictors of hookup participation. Also, a cross-sectional study revealed that college students holding more permissive sexual attitudes report more sexual partners, including hookup partners (Townsend et al., 2011). Hookups and casual sex with multiple and/or concurrent partners is relatively common among college students (Grello et al., 2006; Gullette & Lyons, 2006; Laska, Pasch, Lust, Story, & Ehlinger, 2009). However, this practice places students at increased risk for sexually transmitted infections (STIs) and HIV. Currently, young adults age 15-24 account for over half of the new STI diagnoses in the US (Centers for Disease Control and Prevention, 2016). Thus, with evidence suggesting that permissive sexual attitudes influence students' decisions to participate in hookups, great efforts have been made to effectively measure students' sexual attitudes (Garcia et al., 2012; Stinson, 2010).

Measuring College Students' Sexual Attitudes

The quantitative measurement of young adults' and college students' sexual attitudes spans decades (Abler & Sedlacek, 1989; Bromley & Britten, 1938; Ehrmann, 1959; Freedman, 1965; Hendrick, Hendrick, & Reich, 2006; Rockwood & Ford, 1945; Tobin, 2011; Treboux & Busch-Rossnagel, 1995). As a result, several valid and reliable

instruments have been developed to measure this construct (Fisher & Hall, 1988; Fullard & Scheier, 2010; Hendrick et al., 2006; Leiblum, Wiegel, & Brickle, 2003; Tobin, 2011). For example, Fullard and Scheier's (2010) 80-item *Sexual Knowledge and Attitude Test for Adolescents* was designed to measure adolescent's attitudes toward and knowledge of sexual behaviors and experiences. The scale covered topics such as premarital sex, homosexuality, rape/sexual coercion, masturbation, pornography, and pregnancy/contraception, among others. For further illustration, the 13-item *Attitudes Toward Sexuality Scale* was developed to compare the sexual attitudes of adolescents aged 12 to 20 years olds to those of their parent(s) (Fisher & Hall, 1988; Fisher, 2010). Nudity, abortion, contraception, premarital sex, pornography, prostitution, homosexuality, and sexually transmitted diseases were topics covered in this instrument. Specific to college populations, Tobin's (2011) *Sexual Attitudes and Experiences Scale* was developed to measure the sexual attitudes and sexual experiences of undergraduate students and assess the relationship between sexual attitudes and behaviors. Also, Leiblum and colleagues (2003) designed the *Cross-Cultural Attitude Scale* to assess racial and ethnic differences in conservative versus liberal sexual attitudes among university students.

Despite the abundance of instruments that measure college students' sexual attitudes, very few specifically assess students' attitudes toward hooking up. An exception is Bradshaw, Kahn, and Saville's (2010) survey to measure preferences for traditional dating versus hooking up according to a number of different scenarios (e.g. "when partner has a great personality" and "when you met an attractive person when you

were consuming alcohol”). The survey also assesses students’ perceptions of the benefits and risks associated with dating and hooking up. However, to our knowledge, the instrument has not been named, or more importantly, validated. By comparison, Aubrey and Smith's (2013) valid and reliable *Endorsement of the Hookup Culture Index* (EHCI) examines the extent to which college students endorse the rules and assumptions associated with hookup culture. The index measures students’ endorsement of hookup culture per the following five dimensions: (1) hooking up is a way to avoid emotional commitment; (2) hooking up is fun; (3) hooking up enhances one’s status in one’s peer group; (4) hooking up allows one to assert power and control over one’s sexuality; and (5) hooking up reflects one’s sexual freedom. The EHCI provides a valid and reliable avenue for measuring students’ acceptance of hookup culture; however, there is an underlying assumption that student participants have had a hookup experience. Endorsement of the social norms of hookup culture does not necessarily reflect one’s sexual behavior nor does acceptance of the culture necessarily reflect one’s personal attitudes toward hooking up. It is possible that one may accept the rules and assumptions of hookup culture in a broader sense, but have conservative attitudes regarding the sexual behavior of their peers and themselves. Thus, a scale that specifically measures college students’ personal attitudes toward hooking up would fill an important gap in our understanding of hookup culture.

Gender and Racial Differences in Attitudes Toward Hooking Up

Although research shows college students’ sexual attitudes have grown more liberal over the years, the level of liberalism is not the same across all student groups,

particularly gender and racial groups. A meta-analysis examining college students' sexual attitudes revealed distinct gender differences, with men holding more permissive sexual attitudes (Petersen & Hyde, 2010). Similarly, other work assessing students' attitudes toward hooking up suggest men are more permissive in their attitudes, despite similar rates of hooking up between the genders (Allison & Risman, 2013; Bradshaw et al., 2010; Lambert et al., 2003; Owen et al., 2010). Theoretically, the sexually permissive climates of many college campuses are suitable environments for women seeking sexual experimentation, exploration, and self-discovery, yet research suggests they are significantly more likely to prefer dating than hooking up (Bradshaw et al., 2010).

Several studies have shown that hookup culture is not completely free of sexual double standards that may influence one's attitudes regarding the practice (Allison & Risman, 2013; Bogle, 2008; England & Bearak, 2014; Hamilton & Armstrong, 2009). For illustration, a recent study found that men were more judgmental toward women than men who hook up, whereas women were more likely to report feeling disrespected because they hooked up with someone (England & Bearak, 2014). Women also may under-reported intercourse and fellatio during hookups as well as their own initiation of sexual activity during hookups (England & Bearak, 2014). These findings suggest women who participate in hookups can face stigma for exercising their sexual agency and risk damage to their reputations, while men face little to no repercussions for their behavior.

Racial differences in sexual attitudes among college students have been documented to a lesser degree as few studies have examined potential differences among

racial and ethnic groups. Scholars have critiqued most hookup studies' overwhelming focus on gender differences and the sexual attitudes of White students (Bogle, 2007; Heldman & Wade, 2010; Jenkins Hall & Tanner, 2016; Paul et al., 2000; Uecker & Regnerus, 2010). The scant literature detailing the sexual attitudes of Black college students suggests that Blacks hold more positive attitudes toward casual sex and hooking up than their white counterparts. Previous studies of adolescents and young adults found associations between identifying as Black and holding positive views of sex (Cuffee et al., 2007; Sprecher et al., 2013; Weinberg & Williams, 1988). Davidson and colleagues (2008) found that Black college students were more approving of premarital sex than their White counterparts. Specific to hookups, Black college men were reported to hold more liberal sexual attitudes than White college men and be less likely to lose respect for those who hookup (Allison & Risman, 2013).

The literature also details the existence of intra-racial differences in attitudes toward casual sex. Some evidence suggests that Black college women were more likely to approve of premarital sex with casual, occasional, and regular dating partners than Black college men (Davidson et al., 2008). In contrast, a study of hookup and romantic partnering among undergraduate students found that Black students were the only racial group in which women expressed significantly greater agreement with the statement "I wish there were more opportunities for going on dates" while men expressed significantly greater agreement with the statement "Any kind of sexual activity is okay as long as both persons freely agree to it" (pg. 67) (McClintock, 2010). Given that minority populations such as Blacks are disproportionately affected by negative sexual health outcomes such

as HIV and STIs, the inclusion of race as a point of analysis in hookup research is imperative (Centers for Disease Control and Prevention, 2015a, 2016).

Need for a New Scale: The Attitudes Toward Hooking Up Scale

Attitudes toward casual sex and hookups is a salient theme in college sexual health literature. Several scales have been developed to measure attitudes toward sex; however, to our knowledge, no instrument exists that specifically measures attitudes toward hooking up. Thus, the purpose of this exploratory study was to develop and test the Attitudes Toward Hooking Up Scale (ATHS), a brief, multidimensional scale that measures college students' attitudes toward hooking up which can also be used to examine gender and racial difference in attitudes.

Methods

Study Design and Aims

The ATHS was developed and validated by way of secondary data analysis of a national survey of US college students using a two-phase design. The overarching aim of this two-phase design was to develop and validate a brief, easy to administer scale that assesses college students' attitudes toward hooking up and can be used in diverse gender and racial populations. Specifically, the aim of Phase 1 was to develop a brief instrument to measure college students' attitudes toward hooking up by way of exploratory factor analysis and reliability analysis. The aim of Phase 2 was two-fold: (1) replicate the factor structure of the ATHS using a sample of Black and White students and (2) assess the construct validity of the ATHS through the examination of racial and gender differences in mean ATHS scores.

Data source.

The Attitudes Toward Hookups Scale is composed of items derived from the Online College Social Life Survey (OCSLS) (Adkins et al., 2015; Armstrong et al., 2012; England & Bearak, 2014). Briefly, the OCSLS was administered to 24,131 undergraduate students across 22 US colleges and universities between 2005 and 2011. The survey data provide detailed information on dating, hookup, and relationship behaviors, as well as data on students' sexual attitudes and histories. The OCSLS includes data from a diverse cross-section of students attending top-tier private and Ivy League universities (e.g. Harvard), large public flagship universities (e.g. Ohio State), small liberal arts colleges (e.g. Carroll College), and regional and commuter universities (e.g. Middle Tennessee State University). For a list of participating institutions, please see (Allison & Risman, 2013) and for a detailed description of the OCSLS, please see (Armstrong et al., 2012).

Phase 1: Scale Development

Development of the ATHS. Scale items were derived from 21 OCSLS survey items that assessed students' attitudes toward dating, exclusive relationships, marriage, hookups, and sexual pleasure. Using face validity, 13 items related to hooking and casual sex were chosen. The chosen items were as follows: (1) "Any kind of sexual activity is okay as long as both persons freely agree to it"; (2) "I would not have sex with someone unless I was in love with them"; (3) "If women hook up or have sex with lots of people, I respect them less"; (4) "If men hook up or have sex with lots of people, I respect them less"; (5) "My religious beliefs have shaped and guided my sexual behavior"; (6) "If someone has hooked up a lot, I'm less interested in this person as a potential

girl/boyfriend”; (7) “I wish there were more opportunities for hooking up at my school”; (8) “I don't really want to be in an exclusive relationship now because I'd rather be free to date or hook up with multiple people”; (9) “I wish there were more opportunities for going on dates before a relationship is established at my school”; (10) “I wish there were more opportunities for finding someone to have a relationship with at my school”; (11) “One disadvantage of being in an exclusive relationship in college is that it might interfere with moving to another city for a job or graduate school when I graduate”; (12) “One advantage of being in an exclusive relationship is that you have someone to talk to and get love and emotional support from”; and (13) “One advantage of being in an exclusive relationship is that you have someone to have sex with on a regular basis”.

Participants rated their agreement with each item on a 4-point Likert scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*).

Inclusion criteria. The analytic sample was restricted to students who were (1) undergraduates between 18 and 24 years old (National Center for Education Statistics, 2002, 2015a) and (2) provided responses to all survey items included in the study analyses.

Data analysis. The Statistical Package for the Social Sciences version 23.0 (SPSS) for Macintosh was used for data analysis. All positively worded ATHS items—items 1, 6, 7—were reverse coded so that higher scores on these items indicated a more liberal attitude toward hooking up. There were no missing data since as described above, students were retained in the analytic sample only if they provided responses to all 13 survey items. The validity of the ATHS was assessed using exploratory factor analysis

and principal components analysis. Exploratory factor analysis was conducted using principal axis factoring and varimax rotation. Items that yielded an Eigenvalue of 1 or higher were considered for retention in the scale. Further, items with primary factor loadings of .55 or greater and secondary loadings less than .4 were considered for retention (Tabachnick & Fidell, 2014). The internal consistency reliability of the scale was evaluated using Cronbach's alpha coefficient, with an alpha level of at least .70 as the acceptable minimum (Nunnally, 1978). Final decisions regarding the removal or retention of items from the scale were made following the reliability analysis.

Phase 2: Scale Validation

Inclusion criteria. Similar to Study 1, the analytic sample was derived from the Online College Social Life Survey. The sample was restricted to respondents who met the following criteria: (1) racial identity of Black or White; (2) heterosexual orientation; (3) undergraduate classification; (4) between 18 and 24 years old; and (5) provided responses to all ATHS scale items. Note, non-heterosexual students were excluded due to limited literature detailing same-sex hookups and their implications for STI risk.

Data analysis. Construct validity of the ATHS was assessed through the replication of the factor structure of the scale using the analytic sample and the examination of racial and gender group differences in mean ATHS scores. The factor structure was replicated using the same factor analysis and principal components analysis processes described in Study 1. Scale reliability was evaluated using Cronbach's alpha coefficient. Differences in mean scores were examined using two-way analysis of variance (ANOVA) analyses. Then, we used multiple regression analyses that account for the nesting of participants within

colleges—via random intercept (multilevel) regression models—to examine whether race and gender were significant predictors of participants’ attitudes towards hooking up. This analytical approach was taken because it is assumed that students attending the same institution are likely similar in their attitudes toward hooking up. Observations in students’ attitudes toward hooking up are not necessarily independent and likely influenced by the college or university the student attends. Thus, the nesting of students within the colleges and universities must be considered to make correct inferences regarding the influence of race and gender on the outcome variable under investigation. Preliminary analyses examining intra-class correlations (ICC) revealed that 3.77% ($p=.008$) of the variability in ATHS scores could be explained by the school-level variation. Accordingly, a random effect for *university* was included in the analyses. Considering prior literature outlining factors that influence college students’ sexual attitudes, the following variables were controlled in the model: (1) *age of student*; (2) *age at first vaginal intercourse*; (3) *undergraduate classification status*; (4) *student religious affiliation*; and (5) *student residence*.

Results

Phase 1 Results

Descriptive statistics. The implementation of the inclusion criteria reduced the analytic sample to 19,221 students (Table 4.1). In total, 63.5% ($n = 12,211$) of students reported their race as White, 6.1% ($n = 1,174$) were Black, and 69% ($n = 13,258$) identified as female. The mean age was 19.8 years ($SD = 1.47$). The sample was comprised of 34.4% freshmen ($n = 6,606$), 25.3% sophomores ($n = 4,867$), 20% juniors

($n = 3,837$), 16.7% seniors ($n = 3,216$), and 3.6% ($n = 695$) of students who were in their fifth year or higher. Most students (62.6%; $n = 12,029$) reported at least one hookup experience since starting college.

Exploratory factor analysis. The initial factor analysis using all 13 items produced a four-factor solution which accounted for 58% of the variance. The eigenvalues indicated that the four factors explained 22.5%, 15.1%, 12%, and 8.3% of the variance, respectively. All factors had items with loadings of .55 or greater. The first factor had 3 items with loadings of .60 and higher. The second factor had 3 items with loadings of .73 and higher. The third factor had 2 items with loadings of .80 and higher. The fourth factor had 2 items with loadings of .67 and higher. Three items did not have factor loadings of .55 or higher on any of the four factors. No factors had items with secondary loadings of .4 or higher. Despite meeting the factor loading criterion, the scale did not meet the minimum internal consistency requirement ($\alpha=.49$).

After five iterations of item reduction and subsequent factor analyses, 8 of the initial 13 items were retained in the scale. The final iteration revealed a 3-factor solution that accounted for 64% of the variance. The 3 factors explained 34%, 16.1%, and 14% of the variance, respectively. All factors met both primary and secondary factor loading criterion. The first factor had 3 items with loadings of .766 and higher. The second factor had 3 items with loadings of .565 and higher. The third factor had 2 items with loadings of .806 and higher. No factors had items with secondary loadings of .4 or higher. The final factor loading matrix is displayed in Table 4.3. The first factor, labeled *judgmental toward peers*, comprised 3 items that described attitudes toward individuals who hookup

a lot or have sex with lots of people. The second factor, *religious and moral convictions*, included 3 items. These items indicated religious and moral stances regarding casual sexual behavior. The third factor was labeled *preference for hookups* and consisted of two items. These items described desires for more hookup opportunities on campus and preferences for hooking up over romantic relationships. While the scale has three dimensions, the decision was made not to group the 8 items into three individual subscales due to the small number of items that would constitute each subscale (Yong & Pearce, 2013). Inter-item correlations are described in Table 4.4. The 8-item ATHS met the internal consistency requirement with an alpha of .71. The individual items of the ATHS were examined and the findings revealed that deleting any of the item would reduce the internal consistency of the scale.

Scale scoring. The ATHS was scored on a 4-point Likert scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). The scores were obtained by calculating the mean of the 8 ATHS items. Lower scores reflected more conservative (or intolerant) attitudes toward hooking up while higher scores reflected more liberal (permissive) attitudes toward hooking up.

Phase 2 Results

Descriptive statistics. The implementation of the inclusion criteria reduced our analytic sample to 12,300 students (Table 4.2). Accordingly, 69.3% ($n = 8,519$) of the population identified as female and 91.5% ($n = 11,252$) identified as White, while 8.5% ($n = 1,049$) identified as Black. The mean age was 19.77 years ($SD = 1.45$). The sample included 4,482 (36.4%) freshmen, 2,930 (23.8%) sophomores, 2,385 (19.4%) juniors,

2,086 (17%) seniors, and 417 (3.4%) students who were in their fifth year or higher. Students' place of residence was divided among on-campus residences (56.6%), off-campus residences (32.2%), parents' homes (31.5%), and other unspecified residences (.5%). Over a third (37%; $n = 4,551$) of students identified as Christian. Mean age at first vaginal intercourse was 16.9 years ($SD = 1.66$) while 24% ($n = 2,949$) of students had never engaged in vaginal sex. Over two-thirds (67.2%; $n = 8,266$) of the sample reported at least one hookup (either coital or non-coital) experience since starting college.

The factor structure of the ATHS was replicated and did not substantively deviate from the 3-factor model presented in Study 1. As found in Study 1, the three-factor solution accounted for 64% of the variance, with the 3 factors explaining 34%, 16.2%, and 14% of the variance, respectively. All factors met both primary and secondary factor loading criterion and did not differ considerably from the factor loadings presented in Table 4.3. Like Study 1, the ATHS was reliable in this analytic sample, with a Cronbach's alpha of .713.

Overall, participants reported a mean score of 2.49 ($SD = .49$). Male students reported a mean score of 2.67 ($SD = .48$), while female students reported a mean score of 2.41 ($SD = .47$). White and Black students reported mean scores of 2.50 ($SD = .49$) and 2.39 ($SD = .50$), respectively. White men had a mean score of 2.67 ($SD = .49$) and White women had a mean score of 2.42 ($SD = .47$). Black men had a mean score 2.61 ($SD = .48$) and Black women had a mean score of 2.29 ($SD = .48$).

Bivariate analyses. The two-way ANOVA analyses revealed significant differences in mean ATHS scores among racial and gender groups. Mean scores among

White students were significantly higher than their Black counterparts ($F(1, 12296) = 32.93, p < .001$). Males students' scores were significantly higher than their female counterparts' ($F(1, 12296) = 302.69, p < .001$). However, the interaction between race and gender was non-significant ($F(1, 12296) = 3.75, p = .053$).

Multivariate analyses. A series of regression models were conducted to examine the unadjusted and adjusted associations between race, gender, and attitudes toward hooking up while accounting for the clustering of students in the colleges and universities. The results of these analyses are presented in Table 4.5. Model 1 found both race and gender to be significant predictors of attitudes toward hooking up. White students had higher mean ATHS scores when compared to their Black counterparts ($F = 11.74, p = .001$). Male students reported higher mean scores than female students ($F = 664.28, p < .001$). In Model 2, all control variables were added. Race ($F = 10.03, p = .002$) and gender ($F = 692.43, p < .001$) remained significant predictors of attitudes toward hooking up. Additionally, religious affiliation, fifth year or higher in school, parental residence, age, and age at first vaginal intercourse were all significantly associated with attitudes toward hooking up. Model 3 was refined and simplified by removing control variables that did not contribute significantly to the outcome variable at the $p < .05$ level of significance. Across all models, goodness-of-fit was assessed using Bayesian information criterion (BIC) values. In the empty model (not shown), the BIC was 11681.5. Model 3 revealed a BIC value of 10305.11; the smaller BIC value indicates that Model 3 was the best fit for the data.

Discussion

The purpose of these analyses was to develop and test an instrument capable of assessing college students' attitudes toward hooking up. Accordingly, the aim of Phase 1 was to develop and validate a brief instrument capable of measuring college students' attitudes toward hooking up. To that end, factor analyses and inter-item reliability analyses provide evidence for the validity and reliability of the ATHS for use with college students. Exploratory factor analysis and principal component analyses of the original 13 attitude items resulted in 3 factors consisting of 8 items. These three factors were labeled disrespect of peers, religious and moral convictions, and preference for hookups. Further, inter-item reliability analyses produced an acceptable alpha of .71. These preliminary results indicate the potential of the ATHS to assess college students' attitudes toward hooking up.

The aim of Phase 2 was two-fold: (1) replicate the factor structure of the ATHS in a smaller analytic sample of Black and White college students and (2) examine the construct validity of the ATHS through the assessment of racial and gender group differences in mean ATHS scores. The results of Phase 2 lend support to the ATHS' 3-factor structure revealed in Phase 1. The factor analysis found a 3-factor solution with factor loadings and an internal consistency nearly identical to those found in Phase 1. Construct validity was demonstrated through ANOVA and regression analyses of racial and gender differences. Black and female students had significantly lower mean scores (i.e., indicating more conservative attitudes) than White and male students, respectively. However, the interaction between race and gender was insignificant. Simply put, race and

gender were each associated with attitudes, but the association between gender and attitudes did not vary by race. Phase 2's findings align with prior research which suggests college women hold more conservative attitudes toward casual sex (Bradshaw et al., 2010; England & Bearak, 2014; Uecker & Regnerus, 2010). However, these results do not support the prevailing assumption that Black students display more permissive attitudes toward casual sex than their White counterparts (Cuffee et al., 2007; Davidson et al., 2008; Sprecher et al., 2013); instead, they suggest the opposite.

Considering these findings, the ATHS presents as a potentially useful tool for college health professionals seeking to specifically assess social identity predictors of college students' attitudes toward hooking up. Future studies may extend beyond race and gender to examine other social identities such as age, sexual orientation, socioeconomic status, and non-binary gender identity, all of which may predict college students' attitudes toward hooking up. Prior research suggests different social groups, particularly those of marginalized status, may hold attitudes toward casual sex and hookups that differ from the predominately heterosexual, White female sample found in most hookup literature (Heldman & Wade, 2010; Jenkins Hall & Tanner, 2016). These differences merit further investigation as certain groups such as Black women, transgender individuals, gay, bisexual, and other men who have sexual with men, and others who lie at the intersection of multiple marginalized identities face higher rates of STI and HIV infection (Centers for Disease Control and Prevention, 2015b, 2016a, 2016b). In this study, Black students were found to have more permissive attitudes toward hooking up than their White counterparts; yet, research shows that Black students

are disproportionately affected by HIV and STIs. This finding appears contradictory, however, sexual attitudes alone do not determine sexual behavior and practices.

Accordingly, more work is needed to explore the influence of hookup attitudes on hookup participation and high-risk hookup behaviors as past studies have linked permissive sexual attitudes to participation in casual sex relationships (Katz & Schneider, 2013; J. Townsend & Wasserman, 2011). College health professionals seeking to continue this work can use the ATHS in conjunction with other scales—e.g. Correct Condom Use Self-Efficacy Scale (Crosby, Graham, Milhausen, Sanders, & Yarber, 2010), Safe Sex Behavior Questionnaire (DiIorio, Parsons, Lehr, Adame, & Carlone, 1992), STD Attitude Scale (Yarber, Torabi, & Veenker, 1989), and Sexual Risk Survey (Turchik & Garske, 2009)—to examine whether attitudes toward hooking up predict participation in specific high-risk casual sexual behaviors such as concurrent partnerships, substance use prior to hookups, and condomless sex.

Although hookups are common among college students and may pose a considerable sexual health risk to some populations, the practice is highly pathologized without attention to the different sexual behaviors that can occur during hookups. All hookups do not involve penetrative sex or multiple/concurrent partnerships. Instead, many hookups only involve kissing and heavy petting and some students have multiple “hookups” with the same partner over a period of time (Fielder & Carey, 2010b; Paul et al., 2000; Reiber & Garcia, 2010). Future research should seek to address these nuances and their implications for sexual health risk.

Limitations

Some limitations should be considered when interpreting the results of this study. First, scale items were solely collected from the OCSLS survey and validated on the larger OCSLS sample and a smaller subsample. The ATHS was deemed valid and reliable; however, the internal consistency can be strengthened through the inclusion of more scale items. Per Nunnally (1978), 5 additional items could potentially raise the instrument's reliability to an alpha of .80, if the additional items are of good quality. Additionally, the ATHS should be validated through confirmatory factor analysis and test-retest reliability analysis using independent samples of college students selected using convenience-sampling as opposed to random sampling methods. Random sampling could potentially increase the generalizability of the scale and improve the authenticity of survey responses.

Finally, the sample was predominantly White and female. Black and male students are underrepresented in the OCSLS. Black students were on average 14% of the total US undergraduate population between 2005 and 2011 (Snyder & Dillow, 2015), yet they accounted for only 6.5% the OCSLS sample. Similarly, male students were nearly 43% of the total US undergraduate population between 2005 and 2011 (Snyder & Dillow, 2015), but they made up only 30.9% the OCSLS sample. Also, the sample lacks representation of students from Historically Black Colleges or Universities (HBCUs), as none of these institutions participated in the survey. Future studies should include a population of students that is representative of the racial/ethnic and gender diversity present on US college campuses. The inclusion of students from both HBCUs and other

minority-serving institutions could improve the generalizability of the ATHS. Further, a larger sample of Black students would possibly give more power to analyses assessing the interaction between race and gender.

Conclusion

The psychometric evidence presented in this study suggests that the ATHS is a valid and reliable instrument that assesses attitudes toward hooking up in college student populations. The instrument can be used to examine attitudinal differences between racial and ethnic groups. In summary, the ATHS is a brief, easy to administer tool that can be used by college health researchers and administrators seeking to gain a better understanding of their students' general attitudes toward hooking up and to identify student groups that may benefit from additional sexual risk assessment and sexual risk reduction programming.

Table 4.1. Sample Demographics for Phase 1, N= 19,221

	N (%)	Mean
Race		
Black	1174 (6.1)	
White	12,211 (63.5)	
Asian	2,729 (14.2)	
Hispanic	2,075 (10.8)	
Native American	62 (.3)	
Other Race	857 (4.5)	
Unreported	113 (.6)	
Gender		
Women	13,258 (69.0)	
Men	5,914 (30.8)	
Transgender	26 (.1)	
Unreported	23 (.1)	
Age		19.80
18	4,150 (21.6)	
19	5,305 (27.6)	
20	3,891 (20.2)	
21	3,174 (16.5)	
22	1,816 (9.4)	
23	582 (3.0)	
24	303 (1.6)	
Class Standing		
Freshman (1 st Year)	6,606 (34.4)	
Sophomore (2 nd Year)	4,867 (25.3)	
Junior (3 rd Year)	3,837 (20.0)	
Senior (4 th Year)	3,216 (16.7)	
5 th year or higher	695 (3.6)	
Table continued on next page		

Table 4.1. Sample Demographics for Phase 1, N= 19,221, continued

	N (%)	Mean
Age at first vaginal sex		16.9
Never had vaginal sex	5,496 (28.6)	
12 or younger	112 (.6)	
13	214 (1.1)	
14	652 (3.4)	
15	1,728 (9.0)	
16	2,848 (14.8)	
17	2,999 (15.6)	
18	3,105 (16.2)	
19	1,220 (6.3)	
20	570 (3.0)	
21	217 (1.1)	
22	51 (.3)	
23	9 (<.1)	
Sexual Orientation		
Heterosexual	17,630 (91.7)	
Bisexual	642 (3.3)	
Homosexual	533 (2.8)	
Unsure	356 (1.9)	
Unreported	60 (.3)	
Hookup Experience?		
Yes	12,029 (62.6)	
No	7,192 (37.4)	

Table 4.2. Sample Demographics for Phase 2, n= 12,300

	N (%)	Mean
Race		
Black	1,049 (8.5)	
White	11,251 (91.5)	
Gender		
Female	8,519 (69.3)	
Male	3,781 (30.7)	
Age		
		19.77
18	2,691 (21.9)	
19	3,465 (28.2)	
20	2,442 (19.9)	
21	2,024 (16.5)	
22	1,175 (9.6)	
23	339 (2.8)	
24	164 (1.3)	
Class Standing		
Freshman (1 st Year)	4,482 (36.4)	
Sophomore (2 nd Year)	2,930 (23.8)	
Junior (3 rd Year)	2,385 (19.4)	
Senior (4 th Year)	2,086 (17.0)	
5 th year or higher	417 (3.4)	
Residence		
On-campus	6,956 (56.6)	
Off-campus	3,869 (31.5)	
Parents	1,391 (11.3)	
Other	64 (.5)	
Table continued on next page		

Table 4.2. Sample Demographics for Phase 2, n= 12,300, continued

	N (%)	Mean
Religion		
Christian	4,551 (37.0)	
Other Religion Affiliation	2,716 (22.1)	
No Religious Affiliation	4,720 (38.4)	
Not Reported	313 (2.5)	
Age at first vaginal sex		
Never had vaginal sex	2,951 (24.0)	16.62
12 or younger	60 (.5)	
13	124 (1.0)	
14	433 (3.5)	
15	1,200 (9.8)	
16	2,027 (16.5)	
17	2,108 (17.1)	
18	2,088 (17.0)	
19	771 (6.3)	
20	368 (3.0)	
21	133 (1.1)	
22	30 (.2)	
23	7 (.1)	
Hookup Experience		
Yes	8,266 (67.2)	
No	3,781 (32.8)	

Table 4.3. Final Rotated Factor Loadings for the Principal Components Analysis of the Attitudes Toward Hooking Up Scale

Items	Factor		
	Disrespect of Peers	Religious/Moral Convictions	Preference for Hookups
If someone has hooked up a lot, I'm less interested in this person as a potential girl/boyfriend	.787		
If women hook up or have sex with lots of people, I respect them less	.792		
If men hook up or have sex with lots of people, I respect them less	.766		
Any kind of sexual activity is okay as long as both persons freely agree to it *		.776	
I would not have sex with someone unless I was in love with them		.565	
My religious beliefs have shaped and guided my sexual behavior		.799	
I don't really want to be in an exclusive relationship now because I'd rather be free to date or hook up with multiple people*			.809
I wish there were more opportunities for hooking up at my school*			.806

* Item is reverse coded. *Note:* Values < .4 are left blank.

Table 4.4. Attitudes Toward Hooking Up Scale Item Correlation Matrix

	If someone has hooked up a lot, I'm less interested in this person as a potential girl/boyfriend	If women hook up or have sex with lots of people, I respect them less	If men hook up or have sex with lots of people, I respect them less	Any kind of sexual activity is as long as both persons freely agree to it	I would not have sex with someone unless I was in love with them	My religious beliefs have shaped and guided my sexual behavior	I don't really want to be in an exclusive relationship now because I'd rather be free to date or hook up with multiple people	I wish there were more opportunities for hooking up at my school
If someone has hooked up a lot, I'm less interested in this person as a potential girl/boyfriend	1							
If women hook up or have sex with lots of people, I respect them less	.433**	1						
If men hook up or have sex with lots of people, I respect them less	.455**	.497**	1					
Any kind of sexual activity is okay as long as persons freely agree to it	.121**	.167**	.181**	1				
I would not have sex with someone unless I was in love with them	.259**	.284**	.381**	.253**	1			
My religious beliefs have shaped and guided my sexual behavior	.209**	.260**	.272**	.359**	.438**	1		
I don't really want to be in an exclusive relationship now because I'd rather be free to date or hook up with multiple people	.110**	.083**	.169**	.097**	.278**	.059**	1	
I wish there were more opportunities for hooking up at my school	.101**	.032**	.200**	.118**	.226**	.073**	.364**	1

** Correlation is significant at the 0.01 level

Table 4.5. Multiple Regression Results for Attitudes Toward Hookups (Models 1-3)

Predictor Variables	Analytic Sample (N=12,300)		
	Model 1 Est. ¹ (SE) ²	Model 2 Est. ¹ (SE) ²	Model 3 Est. ¹ (SE) ²
Race			
Black	Ref.	Ref.	Ref.
White	.058 (.017)**	.053 (.016)**	.053 (.017)**
Gender			
Women	Ref.	Ref.	Ref.
Men	.253 (.009)***	.250 (.009)***	.249 (.009)***
Control Variables			
Age		.014 (.005)*	.024 (.007)***
Age at first vaginal sex		-.039 (.002)***	-.039 (.003)***
Class Standing			
Freshman		Ref.	Ref.
Sophomore		-.007 (.013)	--
Junior		-.021 (.018)	--
Senior		-.041 (.022)	--
Fifth year and higher		-.086 (.033)***	-.048 (.024)*
¹ Estimate; ² Standard error; *p<0.05; **p<0.01; ***p<0.001			Table continued next page

Table 4.5. Multiple Regression Results for Attitudes Toward Hookups (Models 1-3), continued

Control Variables	Model 1 Est. ¹ (SE) ²	Model 2 Est. ¹ (SE) ²	Model 3 Est. ¹ (SE) ²
Religion			
Christian		Ref.	Ref.
Other Religious Affiliation		-.108 (.011)***	-.108 (.012)***
No Religious Affiliation		-.233 (.010)***	-.233 (.013)***
Residence			
On-Campus		Ref.	Ref.
Off-Campus		-.013 (.013)	--
Parents		.045 (.018)*	.051(.016)**
Other Residence		.010 (.056)	--
Estimates of Covariance Parameters			
Residual	.191 (0.003)***	.175 (0.002)***	.175 (0.003)***
Intercept			
[Subject= OCSLS Colleges] Variance	0.007 (0.003)**	0.005 (0.002)**	0.005 (0.002)**
¹ Estimate; ² Standard error; Ref. = Reference Category; *p<0.05; **p<0.01; ***p<0.001			

CHAPTER V

RELATIONSHIP INTENTIONS, RACE, AND GENDER: STUDENT DIFFERENCES IN CONDOM USE DURING VAGINAL HOOKUPS

Introduction

Hookups—casual sexual encounters between individuals without the expectation of an ensuing dating or romantic relationship (Garcia et al., 2012)—are a continued topic of interest among college and sexual health researchers (Bogle, 2008; Garcia et al., 2012; Heldman & Wade, 2010; Stinson, 2010). With estimates that 60-80% of US college students report at least one hookup during their tenure, the potential sexual health consequences posed by hookups involving penetrative sex must be considered (Bogle, 2008; Eshbaugh & Gute, 2008; Fielder & Carey, 2010a; Garcia et al., 2012; Lambert et al., 2003; Paul et al., 2000). The number of sexually transmitted infections (STIs) specifically attributable to hookups is unknown; yet young adults ages 15 to 24 account for 64.3% and 49.7% of all reported chlamydia and gonorrhea cases and in the US, respectively (Centers for Disease Control and Prevention, 2016).

Although not all hookups include penetrative behaviors, hookup events which include vaginal and anal sex may elevate the risk of STIs due to college students' inconsistent condom use in both casual and romantic partnerships (Fielder & Carey, 2010b; Lewis et al., 2012). According to the American College Health Association's National College Health Assessment (ACHA-NCHA) (2016), 46% of students reported

vaginal sex in the last 30 days, yet less than half of these students claimed to have always used a condom or used one most of the time during vaginal sex in the last 30 days. An event-level study of 824 students revealed that 53% (n = 439) reported sexual intercourse during their last hookup. Of those reporting sexual intercourse, only 47% (n = 206) reported using a condom (Lewis et al., 2012). In addition, the probability of unprotected sex during hookups increased from 7% to 16 % among women, and from 6% to 15% among men between years 1 and 4 of college (Bearak, 2014). Considering the ubiquity of hookups, the prevalence of inconsistent condom use among students, and risk of STI acquisition, an examination of condom use during vaginal sex hookups is necessary.

Pre-hookup Relationship Intentions and Condom Use

Several factors have been found to influence condom use among college students. Alcohol and substance abuse, feelings of invincibility, low risk perception, and perceived norms are all risk factors correlated with inconsistent condom use (Downing-Matibag & Geisinger, 2009; J. Dworkin, 2005; Hood & Shook, 2014; LaBrie et al., 2014). Condom use is typically higher in casual sex relationships in comparison to romantic and monogamous relationships (Bearak, 2014). However, very few studies discuss the influence of relationship intentions on condom use during hookups.

Hookups are often characterized as brief, commitment-free, “no strings attached” encounters. Consequently, it is assumed both participating parties have a mutual understanding of the expectations and outcomes of the sexual relationship. Yet, it is suggested some students may view hookups as potential avenues for establishing romantic partnerships. Garcia and Reiber's (2008) study of students' hookup motivations

revealed that 54% cited emotional gratification, while 51% desired the initiation of a traditional romantic relationship; no gender differences were found. Another investigation found that 65% of women and 45.2% of men hoped their hookup encounter would progress into a committed relationship. Further, about 51% of women and 42% of men discussed the possibility of a committed relationship with their hookup partner (Owen & Fincham, 2011).

To our knowledge, there have been no investigations into the association between relationship intentions and condom use during hookups. But, condomless sex may be a method of securing a romantic partnership, particularly among women (Alleyne & Gaston, 2010; Ferguson et al., 2006; Foreman, 2003a, 2003b). Women typically outnumber men on US college campuses (Snyder & Dillow, 2015), and their large numbers often disadvantage them in the campus sexual marketplace—the campus social structures in which individuals search for a partner (Bogle, 2008; Ellingson et al., 2004; Kelly, 2012; Rhoads, 2012; Uecker & Regnerus, 2010). Both men and women report similar rates of hooking up; however, the gender ratio disparity may afford men more power in partner selection and relationship formation. (Bogle, 2008; Uecker & Regnerus, 2010). Women are more likely to prefer dating than the casual sex practice and those attending female-majority institutions who desire heterosexual dating arrangements may be less successful in their searches due to the short supply of suitable, potential partners (Bradshaw et al., 2010). Men, on the other hand, may enjoy more dyadic power in their sexual and romantic partnerships due to the oversupply of attractive alternatives within the sexual marketplace (Adkins et al., 2015; Ellingson et al., 2004; Guttentag & Secord,

1983; Uecker & Regnerus, 2010). This phenomenon may lead some women to engage in non-monogamous relationships, settle for undesirable partners, and forgo condoms to edge out competition posed by other women (Ferguson et al., 2006; Hall et al., 2014; Jenkins Hall & Tanner, 2016; Newsome et al., 2014). Accordingly, relationship intentions prior to hookups is an unexplored topic that requires further examination.

Gender, Race, and Condom Use

Woman and Blacks in the US face tremendous disparities in STI acquisition (CDC, 2016). Considering the current STI epidemic and sexual health disparities, researchers are also looking at the gender and racial disparities that may exist in condom use during hookups. Overall, men and women report similar rates of hooking up (Owen et al., 2010); however, women may be at increased risk for STIs and HIV (Downing-Matibag & Geisinger, 2009). Currently, women ages 15 to 24 years old represent 47.4% and 27% of all reported chlamydia and gonorrhea cases in the US, respectively (CDC, 2016). Penetrative hookups involving unprotected vaginal sex present a heightened risk to women as they are more susceptible to STIs and HIV due to the anatomy and physiology of the vagina, which makes viral and bacterial transmission more efficient (Dworkin, 2005; McCree & Rompalo, 2007; Moench et al., 2001). Among college women, this risk is exacerbated by inconsistent condom use.

Thirty-one percent of sexually active female college students always used condoms during vaginal sex in the last 30 days (compared to 54.5% of male students); however, the survey did not distinguish between sexual intercourse in monogamous versus casual relationships (American College Health Association, 2016). A smaller

study found no significant relationship between gender and condom use, yet of those participants reporting sexual intercourse in the past three months, more males (57%) than females (43%) reported condom use (Asare, 2015). This study, too, did not distinguish between condom use in monogamous versus casual relationships. Specific to hookups, a study of first-semester college women found that 69% reported condom use during their most recent hookup (Fielder & Carey, 2010b). Another study of 10,275 students revealed that 67% of women used a condom the last time they had vaginal intercourse within hookup, compared to 74% of men (Bearak, 2014). While some condom use studies do not distinguish between relationship status, evidence suggest condom use frequency among college women was found to decrease over time in both monogamous and casual sexual partnerships as partners become more familiar (Walsh et al., 2013). More research involving gender differences in condom use in the context of hooking up is warranted.

In addition to gender, national STI surveillance data indicate stark racial disparities among young people of color; particularly, Black young adults are disproportionately overrepresented in the STI epidemic. The rate of reported chlamydia cases among Black young adults aged 15-24 years is 4,593.4 cases per 100,000, which is nearly 4.7 times the rate of their White counterparts. Regarding reported gonorrhea cases, rates among Black young adults aged 15-24 is 10.4 times that of whites (1,487.3 vs 142.1 cases per 100,000) (CDC, 2016). Several researchers have called for the inclusion of Black students in hookup studies. However, relatively little is known about this population's sexual behaviors and risk factors in the context of hookups and how they might differ from their White counterparts (Heldman & Wade, 2010; Jenkins Hall &

Tanner, 2016; Uecker & Regnerus, 2010). This may be due to evidence suggesting that hookups are not prevalent among Black students and they are more likely to use condoms than White students (Bogle, 2008; Buhi et al., 2010; Davis, Sloan, MacMaster, & Kilbourne, 2007; Owen et al., 2010). Despite this evidence, Black students should not be excluded from hookup research.

Several studies of Black students' sexual practices indicate inconsistent condom use. A CDC sponsored study focusing on HIV testing and prevention at seven historically Black colleges and universities (HBCUs) noted that 35.4% of respondents did not use a condom during last sexual intercourse (Thomas et al., 2008). Another study of Black HBCU students found that 31% did not use a condom during their last sexual encounter (Hodge & Wade, 2007). Further, 64% of students reporting 2 or more sexual partners in the previous 12 months did not use a condom during their last sexual encounter. El Bcheraoui et al.'s (2013) study of Black students attending 24 HBCUs corroborates these findings. The data revealed that 36.2% of students surveyed did not use condoms during their last sexual intercourse. Considering the adverse sexual health outcomes facing young Black adults and evidence detailing inconsistent condom use, further investigation into their sexual practices and risk behaviors in the context of hooking up is necessary.

Current Study

Given the limitations of existing research on college sexual hookup behavior, this exploratory study examines the association between pre-hookup relationship intentions and condom use at last vaginal hookup. This study also examines racial and gender differences in condom use during last vaginal hookup. Understanding how relationship

intentions, race, and gender influence condom use during hookups can inform racial- and gender-competent intervention and programming efforts that seek to reduce the incidence of STIs and promote sexual health among college populations.

Methods

Data Source

This study involved secondary analysis of data from the Online College Social Life Survey (OCSLS). Conducted between 2005 and 2011, this 15 to 20 minute survey was administered to 24,131 college students at 22 colleges and universities across the US (Armstrong et al., 2012). A diverse set colleges and universities are included in the survey including large state universities, Ivy League and elite private universities, regional and commuter universities, small liberal arts colleges, and one community college. All regions of the contiguous US are represented in the survey. Survey participants were recruited in undergraduate courses—primarily in introductory sociology courses—using convenience sampling. Although recruitment was done largely in sociology courses, sociology majors represented 11 percent of the sample population (Armstrong et al., 2012). Participation was voluntary and instructors offered course credit for those completing the survey or an alternative assignment for those choosing not to participate. Accordingly, the response rate was 99 to 100 percent in most classes (Armstrong et al., 2012). The OCSLS captures data from a diverse cross-section of students regarding dating, hookups, relationships, and sexual attitudes and histories.

The large sample size and diversity of participating schools renders the OCSLS the largest survey, to my knowledge, to explore hookup behaviors among college students across the US.

Inclusion Criteria

Given the analytic focus on race, gender, and heterosexual relations among Black and White undergraduates, the analytic sample included students who met the following criteria: (1) self-reported racial identity of Black or White; (2) non-Hispanic ethnicity; (3) 18 to 24 years-old; (4) undergraduate status; (5) self-reported sexual orientation of heterosexual; (6) opposite sex encounter at last reported hookup; and (7) vaginal sex at last hookup.

Note, over 70% of US undergraduate students are 25 years or younger (Snyder & Dillow, 2015), the OCSLS groups all participants over 24 years old into a “25+” category. Because it is possible that many of the 1,457 participants in this category were 26 years or older, only those who were 24 years or younger were included in the study sample.

Also, transgender students were excluded from the sample because they accounted for only 1% (n=36) of the OCSLS participants. In light of the marginalization and stigma faced by this group, the lack of research examining transgender college students’ sexual practices, and their small numbers in the survey, an analysis of their sexual attitudes, partners, and behaviors without extensive background research was inappropriate.

Measures

Independent variables.

Pre-hookup relationship intentions. Students were asked the following question about their last hookup partner: “Were you interested in having a romantic relationship with the person you hooked up with before you hooked up?” The response options for this item included: (1) “No, I wasn't at all interested”, (2) “Possibly; I didn't really know yet”, (3) “Maybe; it had some appeal”, and (4) “Yes, I was definitely interested”. This item was transformed to a categorical variable with three possible values representing no interest, unsure, and definite interest.

Race. Students were asked, “If you had to pick one racial or ethnic group to describe yourself, which would it be?” Response options included 14 racial and ethnic categories. Only students responding as White or Black/African American were included in the study. Race was dichotomized to ‘Black’ and ‘White’.

Gender. Students were asked, “Which sex are you?” Response options included four categories: Male, Female, Transgender (male to female), and Transgender (female to male). Only students indicating male or female were retained. Gender was dichotomized to ‘men’ and ‘women’.

In prior studies of young adults and college students, age (Reece et al., 2010), early initiation of sexual activity (O'Donnell, O'Donnell, & Stueve, 2001), undergraduate classification status (Bearak, 2014), religiosity (Brimeyer & Smith, 2012; Burdette, Ellison, Hill, & Glenn, 2009), fraternity/sorority membership (Scott-Sheldon, Carey, & Carey, 2008), student athlete status (Reel, Joy, & Hellstrom, 2012), and student residence

(Willoughby & Carroll, 2009) were all found to influence sexual behavior and condom use. Accordingly, these variables were controlled during data analysis.

Age of student and age at first vaginal intercourse. Students were asked to provide their current age. They were also asked to identify their age at the time of their first vaginal sex experience. Both variables are continuous.

Undergraduate classification status. Students were asked “What is your current year in school?”. In this study, the variable is categorical with the following categories: (1) Freshman-first year; (2) Sophomore-second year; (3) Junior-third year; (4) Senior-fourth year; (5) fifth year or higher.

Religious Affiliation. Students were asked to identify their current religious preference and were provided ten response categories. This variable was transformed into a categorical variable with three categories: (1) Christian; (2) other religious affiliation; and (3) no religious affiliation.

Fraternity/sorority membership. Students were asked, “Are you in a fraternity or sorority?” Response options were ‘yes’ and ‘no.’

Student athlete status. Students were asked, “Are you a member of a varsity athletics team (not club sports or intramurals)?” and were provided three response items: (1) Yes, I compete in a sport that has individual winners of events; (2) Yes, I compete in a sport that has only team winners of events; and (3) no. The purposes of this study, the variable was dichotomized to ‘yes’ and ‘no.’

Student residence. Students were asked “Where do you live?” and six response categories were provided: (1) Dorm; (2) fraternity\sorority housing; (3) other on-campus

housing (4) apartment or house off-campus; (5) with parents; and (6) other. In this study, the six categories were collapsed into four: (1) on campus; (2) off-campus; (3) with parents; and (4) other.

Dependent Variable

Condom use during last vaginal hookup. This variable was created from two survey items. First, students were asked to identify all sexual behaviors that occurred during their last hookup encounter. Next, students were asked if they used a condom during their sexual encounter. A composite dichotomous variable was created and scored 1 if the student reported condomless vaginal sex, and 0 if they used a condom.

Data Analysis

The Statistical Package for the Social Sciences 23.0 (SPSS 23) for Macintosh was used for data analysis. Descriptive univariate analyses were conducted to examine the distributions of the independent and dependent variables. Chi-square analyses were performed to examine the associations between the independent variables and the dependent variable. Chi-square analyses were also used to assess the associations of the independent variables with each of the control variables. Additionally, chi-square analyses were performed to examine the associations among the control variables and dependent variable.

Due to the nesting of students in schools, a multilevel model using random intercept logistic regression was tested to control for the influence of students' college or university on condom use at last vaginal hookup. The preliminary analysis revealed that the variability between schools was insignificant ($p = .32$). Accordingly, single-level

multiple logistic regression analyses were performed to assess whether pre-hookup relationship intentions, race and gender were associated with condom use at last vaginal hookup. A forward stepwise selection method was used so that only variables that significantly improved model fit and that were significantly associated with the dependent variable at the $P < .05$ level were retained in the final model.

Results

Descriptive Statistics

Table 5.1 summarizes the demographic characteristics of the Black and White students from the full OCSLS sample and the analytic sample of the current study. The final analytic sample consisted of 3,315 undergraduate students. Like the OCSLS sample, most students were women (67.1%) and self-reported White race (91.9%). The mean age of 20.14 years ($SD = 1.5$). The sample was nearly evenly split across freshmen, sophomores, juniors, and seniors; though an additional 5.2% were in their fifth year of schooling or higher; the OCSLS sample contained a greater percentage of freshmen (35.2%). In analytic sample, 47.4% of students lived on campus, compared to over half (55%) in the OCSLS sample. More students in the analytic sample reported no religious affiliation (43%). Age at first vaginal intercourse was similar in both samples: 16.89 ($SD = 1.5$) in the OCSLS sample versus 16.6 years ($SD = 1.65$) in the analytic sample.

Roughly 32% of students reported condomless vaginal sex during their last hookup. About 33% of white students reported condomless vaginal sex during their last hookup, while 23.2% of Black students reported condomless vaginal sex. Similarly, nearly 34% of female students reported condomless vaginal sex during their last hookup

while 28.1% of male students reported condomless vaginal sex. When broken down into racial and gender student groups, 25.6% of Black women reported condomless vaginal sex while 34.5% of White women reported the same. Also, 19.2% of Black men reported condomless vaginal sex compared to 29% of White men.

Nearly 27% of students were interested in a romantic relationship with their last hookup partner prior to the hookup, while 47% were unsure and 26% did not desire a relationship. When stratified by both race and gender, 28.6% of Black women, 30.6% of White women, 14.1% of Black men, and 20.3% of White men desired a relationship with their last hookup partner. Approximately 28% of students who reported no relationship interest partook in condomless vaginal sex during their last hookup, while 30.4% of students who were unsure of their relationship intentions reported condomless vaginal sex. Of those students who reported interest in a relationship, 38.2% engaged in condomless sex.

Bivariate Associations

Chi-square analyses revealed a significant association between pre-hookup relationship intentions and condom use at last vaginal hookup ($\chi^2 (2, N=3,315) = 23.41, p < .001$). Post-hoc tests using adjusted standardized residuals found that students who were interested in a relationship with their hookup partner were more likely to report condomless vaginal sex than those who were unsure or didn't want a relationship. Chi-square analyses also found a significant association between race and condom use at last vaginal hookup ($\chi^2 (1, N=3,315) = 10.17, p = .001$). Black students were less likely to report condomless vaginal sex during their last hookup. Another chi-square analysis

found a significant association between gender and condom use at last vaginal hookup (χ^2 (1, $N=3,315$) = 11.00, $p = .001$). Male students were less likely to report condomless vaginal sex during their last hookup.

Regarding bivariate associations between the independent and control variables, chi-square analyses found statistically significant associations between pre-hookup relationship intentions and age (χ^2 (6, $N=3,315$) = 15.03, $p = .02$) and age at first vaginal intercourse (χ^2 (11, $N=3,315$) = 31.86, $p = .001$). In addition, race was statistically significantly associated with age at first vaginal intercourse (χ^2 (11, $N=3,315$) = 86.19, $p < .001$), undergraduate classification (χ^2 (4, $N=3,315$) = 21.34, $p < .001$), religious affiliation (χ^2 (2, $N=3,315$) = 48.54, $p < .001$), fraternity/sorority membership (χ^2 (1, $N=3,315$) = 14.83, $p < .001$), and student athlete status (χ^2 (1, $N=3,315$) = 17.02, $p < .001$). Similarly, gender was statistically significantly associated with age (χ^2 (6, $N=3,315$) = 17.34, $p = .008$), age at first vaginal intercourse (χ^2 (11, $N=3,315$) = 39.38, $p < .001$), undergraduate classification (χ^2 (4, $N=3,315$) = 16.49, $p = .002$), fraternity/sorority membership (χ^2 (1, $N=3,315$) = 15.98, $p < .001$), and student athlete status (χ^2 (1, $N=3,315$) = 78.99, $p < .001$).

Finally, chi-square analyses revealed significant bivariate associations between condom use at last vaginal hookup and age (χ^2 (6, $N=3,315$) = 17.34, $p = .02$), age at first vaginal intercourse (χ^2 (11, $N=3,315$) = 31.86, $p = .001$), undergraduate classification (χ^2 (4, $N=3,315$) = 11.79, $p = .019$), and student residence (χ^2 (4, $N=3,315$) = 22.22, $p < .001$). Accordingly, religious affiliation, fraternity/sorority membership, and student

athlete status were not added to the logistic regression models during multivariate analyses.

Multivariate Analysis

We used a series of logistic regression models to explore the associations of pre-hookup relationship intentions, race, and gender with condomless vaginal sex at last hookup, controlling for age, age at first vaginal intercourse, undergraduate classification, and student residence. The results of these analyses are presented in Table 5.2.

Model 1 contained only the four control variables. According to this model, age ($p=.039$), age at first vaginal intercourse ($p<.001$), and student residence ($p=.001$) were significantly associated with condomless sex during last vaginal hookup. The Hosmer & Lemeshow test of the goodness of fit indicated that the model was a good fit to the data ($p=.187$). In Model 2, pre-hookup relationship intentions were statistically significantly associated with condom use during last vaginal sex hookup ($p<.000$). Students who did not want a relationship with their hookup partner were 16.2% more likely to use condoms during their last vaginal hookup than students who wanted a relationship (OR=1.162; 95% CI [1.32, 1.98]). Students who were unsure about their relationship intentions had higher odds of using condoms (OR=1.41; 95% CI [1.19, 1.68]) when compared to those who wanted a relationship. Age ($p=.027$), age at first vaginal intercourse ($p<.001$), and student residence ($p=.009$) remained significantly associated with condom use. The Hosmer & Lemeshow test of the goodness of fit indicated that model 2 was a good fit to the data ($p=.197$).

In Model 3, both race ($p < .001$) and gender ($p = .005$) were found to be statistically significantly associated with condom use at last vaginal hookup. White students were less likely than Black students to use condoms during their last vaginal sex hookup (OR = .584; 95% CI [.433, .790]). Men were more likely than women to use condoms during their last vaginal sex hookup (OR = 1.26; 95% CI [1.08, 1.49]). Age, age at first vaginal intercourse, student residence, and pre-hookup relationship intentions remained significant. The Hosmer & Lemeshow test of the goodness of fit indicated that model 3 was a good fit to the data ($p = .931$); the addition of race and gender greatly improved the model fit.

Another model (not shown) examined all two-way interactions among the independent variables (race \times gender; race \times pre-hookup relationship intentions; gender \times pre-hookup relationship intentions). None of the interaction terms was found to be significant; thus, the interaction terms were excluded from the final model. In the final model, all variables with p -values higher than .05 were removed. The following variables were retained in the model: pre-hookup relationship intentions, race, gender, age, age at first vaginal intercourse, and student residence. The Hosmer & Lemeshow test of the goodness of fit indicated that the model remained a good fit to the data ($p = .190$).

Discussion

The purpose of this study was to explore the association between pre-hookup relationship intentions and condomless sex during last vaginal sex hookup. The secondary purpose of this study was to investigate the association between race and gender and condom use during last vaginal sex hookup. The final model revealed that

pre-hookup relationship intentions were significantly associated with condomless sex during last vaginal hookup, suggesting that students who did not want a relationship and students who were unsure of their relationship intentions were more likely to use condoms during their last vaginal hookup compared to those who desired a relationship. Further, race and gender were significantly associated with condom use. White students were less likely to have used condoms during their last vaginal hookup when compared to Black students. Male students were more likely than female students to use condoms during their last vaginal sex hookup.

Pre-hookup relationship intention is an area that deserves more examination given the strong association with condomless sex at last vaginal hookup. This finding lends credence to prior research that suggest hookups may be a step in relationship formation for some college students (Foreman, 2003b; Garcia & Reiber, 2008; Jenkins Hall & Tanner, 2016). It also adds complexity to the current conceptualizations of hookups as commitment-free sexual encounters between individuals seeking sexual pleasure and nothing more. These results do suggest that those seeking a relationship with their hookup partners may be at higher risk for STIs and HIV than those who desire casual partnerships. Within the context of hookups, condomless sex may be a display of trust and desire to please one's partner in hopes of securing a romantic relationship. Some hookup encounters certainly evolve into romantic relationships; however, this may not be the mutual expectation or desired outcome in many hookup partnerships (Garcia et al., 2012; Heldman & Wade, 2010; Paik, 2010a). Competing romantic and sexual interests could render students seeking relationships more susceptible to STIs.

The results from this study are also consistent with previous findings which suggest Black students and male students were more likely to report condom use during last intercourse than White students and female students (Buhi et al., 2010). While Black students exhibited greater condom use, their disproportionate representation in the STI epidemic cannot be ignored. Black students are still at greater risk for STIs despite similar or higher rates of condom use than their white counterparts. Buhi et al. (2010) reported that Black students were more likely than their white peers to report an STI in the past year. Similarly, Hou, (2009) found that HBCU Black students were 4.4 times more likely to have had an STI in comparison to their White peers at predominantly White universities despite similar rates of condom use. In this study, STI histories of students were not collected, which limits the ability to assess racial differences in STI risks. Future studies should investigate such histories to gauge the sexual risks posed by hookup participation.

The findings regarding gender are reflective of the current literature which details lower rates of condom use among college women. Several factors not addressed in this study may contribute to these lower rates of condom use. Studies of college women have shown condom use tends to decline overtime as partners become more familiar and hormonal contraceptive use increases (Foreman, 2003b; Manning, Longmore, & Giordano, 2000). On average, students in this study reported having more hookup partners with whom they were familiar since starting college compared to hookup partners who were strangers. Since hookups are not necessarily one-time sexual encounters, it possible condom use declines with each subsequent hookup with a familiar partner.

Future research should examine differences in condom use with familiar hookup partners versus those who are strangers. Another factor could be gender ratio disparities. It is theorized that the overabundance of women on college campuses influence the sexual decision making of college women as there is increased competition for suitable male partners (Adkins et al., 2015; Alleyne & Gaston, 2010; Ferguson et al., 2006; Jenkins Hall & Tanner, 2016; Uecker & Regnerus, 2010). Some women may feel condom negotiation and discussion of safer sex threatens their status in the sexual marketplace (Hall et al., 2014; Newsome et al., 2014). Corroborating this, Foreman (2003) found that women seeking romantic relationships were willing to use condoms as a bargaining tools in order to fulfill their relationship desires. More attention is needed in this area to understand how these social and interpersonal factors influence the sexual decision-making and behaviors of college women.

The interactions among pre-hookup relationship intentions, race, and gender were found to be insignificant in this study. However, this finding does not provide definitive evidence of no difference in relationship intentions and condom use among the student groups when stratified by both race and gender. When stratified by race and gender, 28.6% of Black women, 30.6% of White women, 14.1% of Black men, and 20.3% of White men desired a relationship with their last hookup partner. Further, 25.6% of Black women reported condomless vaginal sex during their last hookup while 34.5% of White women reported the same. Also, 19.2% of Black men reported condomless vaginal sex during their last hookup compared to 29% of White men. Accordingly, the insignificant interaction terms may be reflective of the small number of Black men (n=99) and women

(n=168) in the analytic sample. A larger sample of Black students is needed to explore the intersections between pre-hookup relationship intentions, race, and gender and their possible association with condom use during vaginal hookups.

Understanding gender and racial differences in condom use during hookups help elucidate the potential risks posed by casual sexual practices and provides guidance for how and for whom to intervene. Per the theory of Intersectionality, race and gender are multidimensional and intersecting social categories that operate at the micro-level of the individual and reflect systems of privilege and oppression at the macro level which produce and maintain social disparities (Bowleg, 2012; Crenshaw, 1989; Jenkins Hall & Tanner, 2016). Much of the hookup literature treats race and gender as independent categories of analysis without attention to the impact multiple marginalizations may have on students' sexual behavior and risk factors. It is clear both race and gender influence sexual risk as young women and young Black adults are disproportionately impacted by chlamydia and gonorrhea. Also, there is evidence of gender and racial differences in condom use. However, this study did not reveal significant interactions between race and gender and condom use. This insignificant finding was possibly due to the small number of Black students and the exclusion Historically Black Colleges and Universities (HBCUs) in the OCSLS. It is possible that that the unique sociocultural setting of HBCU campuses—where Black students are the majority—could influence Black students' sexual behaviors and decision making (Buhi et al., 2010; Younge, Corneille, Lyde, & Cannady, 2013).

Considering this, there is still reason to hypothesize that there are differences in condom use among Black and White men and women. For example, young Black women bear the status of being both Black and female and are currently overrepresented in the STI epidemic. Behind gay, bisexual men, and other men who have sex with men (MSM), Black women surpass all racial and gender groups in the rate of reported chlamydia and gonorrhea cases (CDC, 2016). Further, studies suggest that Black college women report lower condom use than Black college men (El Bcheraoui et al., 2013; Hodge & Wade, 2007). Considering these findings, it is imperative to consider the intersecting relationship of race and gender when examining differences in condom use.

Strengths and Limitations

This exploratory study has several notable strengths. First, this study used data from a large, national—albeit not nationally representative— sample of students. To our knowledge, the Online College Social Life Survey is the largest and most comprehensive survey of college students' hookup attitudes and behaviors. Second, this research fills a critical gap in the hookup literature by examining racial and gender differences in condom use during hookups. The study also went deeper to examine the intersection of race and gender and the possible multiplicative these social categories have on condom use during vaginal hookups. Finally, the study addresses the relationship between pre-hookup relationship intentions and condom use at last vaginal hookup. Pre-hookup relationship intentions did not moderate the relationship between race, gender, and condom use; however, the findings suggest students who desire relationships with their hookup partners may be at greater risk for STIs due to decreased condom use.

The study was not without its limitations. One limitation of the study is the small number of Black students—all from predominantly white institutions—in the analytic sample. A larger sample which includes students from Historically Black Colleges and Universities (HBCUs) could have provided more reliable estimates of Black student's condom use. Further, the analyses of the interaction term could have yielded different results if a larger, more diverse sample of Black students was utilized. Another limitation is that prior hookups with the same partner were not controlled for. Some students could have had a history of multiple hookups with the same partner over a period of time. Additionally, there was no differentiation between familiar hookup partners and those who were strangers. Accounting for such factors could possibly explain differences in condom use. Another limitation is the lack of student STI history. Although racial and gender differences in condom use were revealed, no inferences can be made regarding STI disparities among those who participate in condomless hookups. Finally, this sample was limited to heterosexual students. Gay, lesbian, and bisexual students accounted for 6% of the total OCSLS sample population. The sexual practices and behaviors of other marginalized group within hookup culture deserves closer examination in future work.

Conclusion

Hookups may be avenues to establishing romantic relationships and those with romantic aspirations may be at increased risk for STIs and HIV. The findings presented in this study challenge current conceptualizations of hookups as being brief, commitment-free sexual encounters. More research is needed to unpack the meanings

behind the significant association found between pre-hookup relationship intentions and condom use at last vaginal hookup. Further, future research should examine the implications of higher risk hookup practices among students centered at the intersection of multiple marginalized identities. It is possible that race and gender have a multiplicative, deleterious effect on STI risk among student groups such as Black women. In summary, understanding the hookup practices of diverse students could help inform targeted, culturally and socially competent STI risk reduction programming and interventions

Table 5.1. Comparison of OCSLS Sample and Analytic Sample Demographics

	OCSLS Sample (N=16,680) *		Analytic Sample (N= 3,315)	
	N (%)	Mean	N (%)	Mean
Race				
Black	1,576 (9.4)		267 (8.1)	
White	15,104 (90.6)		3048 (91.9)	
Gender				
Female	11,395 (68.3)		2223 (67.1)	
Male	5,285 (31.7)		1092 (32.9)	
Age				
		20.6		20.14
18	3,400 (20.4)		488 (14.7)	
19	4,490 (26.9)		809 (24.4)	
20	3,111 (18.7)		696 (21.0)	
21	2,584 (15.5)		676 (20.4)	
22	1,462 (8.8)		431 (13.0)	
23	460 (2.8)		148 (4.5)	
24	230 (1.4)		67 (2.0)	
25	907 (5.4)		N/A	
Unreported	36 (.2)		N/A	
Class Standing				
Freshman (1 st Year)	5,864 (35.2)		881 (26.6)	
Sophomore (2 nd Year)	3,901 (23.4)		776 (23.4)	
Junior (3 rd Year)	3,229 (19.4)		750 (22.6)	
Senior (4 th Year)	2,795 (16.8)		736 (22.2)	
5 th year or higher	693 (4.2)		172 (5.2)	
Graduate	168 (1.0)		N/A	
Unreported	30 (.2)		N/A	

* Only includes Black and White students from OCSLS sample; N/A = Not Applicable

Table 5.1. Comparison of OCSLS Sample and Analytic Sample Demographics, continued

	OCSLS Sample (N=16,680)*		Analytic Sample (N= 3,315)	
	N (%)	Mean	N (%)	Mean
Age at first vaginal sex		16.89		16.62
Never had vaginal sex	4,198 (25.2)		N/A	
12 or younger	112 (.7)		22 (.7)	
13	213 (1.3)		70 (2.1)	
14	618 (3.7)		201 (6.1)	
15	1,601 (9.6)		523 (15.8)	
16	2,645 (15.9)		779 (23.5)	
17	2,735 (16.4)		686 (20.7)	
18	2,692 (16.1)		674 (20.3)	
19	1,038 (6.2)		227 (6.8)	
20	500 (3.0)		96 (2.9)	
21	212 (1.3)		24 (.7)	
22	55 (.3)		12 (.4)	
23	61 (.4)		1 (.0)	
Greek				
Yes	2,126 (12.7)		521 (15.7)	
No	14,467 (86.7)		2794 (84.3)	
Unreported	87 (.5)		N/A	
Religion				
Christian	6,011 (36.0)		1165 (35.1)	
Other Religion Affiliation	3,732 (22.4)		723 (21.8)	
No Religious Affiliation	6,487 (38.9)		1427 (43.0)	
Unreported	450 (2.7)		N/A	
Athlete				
Yes	1,498 (9.0)		359 (10.8)	
No	15,087 (90.4)		2956 (89.2)	
Unreported	95 (.6)		N/A	
Residence				
On-campus	9,221 (55.4)		1570 (47.4)	
Off-campus	5,462 (32.7)		1380 (41.6)	
Parents	1,776 (10.6)		341 (10.3)	
Other	185 (1.1)		24 (.7)	
Unreported	36 (.2)		N/A	

* Only includes Black and White students from OCSLS sample; N/A = Not Applicable

Table 5.2 Logistic Regression Results for Condomless Vaginal Sex During Last Vaginal Hookup

Independent Variables	Analytic Sample (N=3,315)			
	Model 1 Exp(B) ¹ (SE) ²	Model 2 Exp(B) ¹ (SE) ²	Model 3 Exp(B) ¹ (SE) ²	Model 4 Exp(B) ¹ (SE) ²
Pre-Hookup Relationship Intentions				
Yes		Ref.	Ref.	Ref.
No		1.615 (.104) ^{***}	1.522 (.106) ^{***}	1.532 (.105) ^{***}
Unsure		1.412 (.089) ^{***}	1.388 (.090) ^{***}	1.403 (.090) ^{***}
Race				
Black			Ref.	Ref.
White			.584 (.154) ^{***}	.594 (.153) ^{**}
Gender				
Women			Ref.	Ref.
Men			1.266 (.084) ^{**}	1.253 (.083) ^{**}
Control Variables				
Age	.913 (.044) [*]	.916 (.045) [*]	.905 (.045) [*]	.923 (.030) [*]
Age at first vaginal intercourse	1.127 (.023) ^{***}	1.134 (.023) ^{***}	1.532 (.105) ^{***}	1.142 (.024) ^{***}
Undergraduate Classification				
Freshman (First-year)	Ref.	Ref.	Ref.	
Sophomore (Second-year)	.828 (.120)	.837 (.120)	.803 (.121)	
Junior (Third-year)	.940 (.150)	.953 (.151)	.960 (.152)	
Senior (Fourth-year)	.919 (.177)	.921 (.178)	.931 (.179)	
Fifth year and higher	1.303 (.259)	1.288 (.261)	1.269 (.263)	
Student Residence				
On-campus	Ref.	Ref.	Ref.	Ref.
Off-campus	.944 (.099)	.930 (.100)	.956 (.100)	.935 (.095)
Parents	.639 (.131) ^{**}	.641 (.132) ^{**}	.656 (.133) ^{**}	.648 (.131) ^{**}
Other residence	1.256 (.460)	1.175 (.461)	1.245 (.465)	1.197 (.463)
Hosmer & Lemeshow Test (Goodness of Fit)				
	.187	.197	.931	.190

¹Odds Ratio; ²Standard error; Ref.-Reference Group; *p<0.05; **p<0.01; ***p<0.001

CHAPTER VI

EPILOGUE

What Was Learned

Using a transformative sequential design rooted in an intersectional theoretical framework, this study explored the intersecting relationship between race and gender and its association with college students' attitudes toward hooking up and condom use during vaginal hookups. Additionally, the study explored Black college women's perceptions of and attitudes toward hookup culture on their college campus. The two papers presented in this dissertation specifically focused on the development and initial validation of the Attitudes Toward Hooking Up Scale and the association between pre-hookup relationship intentions, race, gender, and condom use during last vaginal hookup. Findings from both papers suggested that race and gender were statistically significantly associated with attitudes toward hooking up and condom use during last vaginal hookup.

Paper 1 discussed the initial development and validation of the Attitudes Toward Hooking Up Scale (ATHS). The findings revealed a brief, valid and reliable 8-item scale with a 3-factor structure that can be used by researchers and college health professionals to measure students' attitudes toward hooking up. The construct validity of the scale was demonstrated through the examination of racial and gender differences in mean ATHS scores. The results presented in the paper are consistent with previous research among

college students which identified gender and racial differences in attitudes toward casual sexual behavior (Leiblum et al., 2003b; Petersen & Hyde, 2010). As in prior studies, women held more conservative attitudes toward hooking up than men. In terms of racial differences, Black students reported more conservative attitudes toward hooking up than their White counterparts.

The results in paper 2 showed that pre-hookup relationship intentions were significantly associated with condom use at last vaginal hookup. Students who desired a relationship with their hookup partner were less likely to have used a condom when compared to students who expressed no desire or were unsure of their relationship intentions. The findings also aligned with past research, which suggested differences in condom use among racial and gender groups of college students. Similar to findings presented in Buhi et al.'s (2010) study, Black students were more likely to report condom use during their last vaginal hookup encounter when compared to White students. The data analyses also revealed that women were less likely than men to report condom use during their last vaginal hookup.

Interestingly, the interaction between race and gender had no influence on students' attitudes toward hooking up and condom use during last vaginal hookup. On the surface this finding is surprising considering that Black women had a mean ATHS score of 2.29 ($SD = .48$) in comparison to the mean scores of White men (2.67; $SD = .49$), White women (2.42; $SD = .47$), and Black men (2.61; $SD = .48$). Further, 25.6% of Black women reported condomless vaginal sex during their last hookup compared to 34.5% of White women, 19.2% of Black men, and 29% of White men. However, the insignificant

finding could be due in part to the small number of Black students from predominantly White universities included in the study. The OCSLS lacked participation from HBCUs, whose student bodies are majority Black. The racial and gender composition of college campuses can influence the sexual experiences and decision making of college students (Adkins et al., 2015; Allison & Risman, 2014; McClintock, 2010). Accordingly, the sexual climates and networks of HBCUs may differ from those of predominantly White institutions; which in turn may have unique implications for students attending the predominantly Black institutions. Future work should use samples of Black students matriculating in both settings. The inclusion of HBCU students could help researchers more accurately assess gender and racial differences in sexual attitudes and behaviors and produce programming and interventions that reflect the reality of Black college students.

Preliminary Qualitative Findings

As discussed in Chapter 3: Research Design and Methods, focus groups were conducted with young Black undergraduate women attending the University of North Carolina at Greensboro. At the time of publication, two focused groups have been completed. Participants included 9 self-identified heterosexual, Black women. The mean age of the women was 21.11 ($SD = 1.16$) and most were in their senior year of college. While data collection is ongoing, the preliminary qualitative results are revealing. A few highlights from the focus groups are discussed below.

Unlike the quantitative results, preliminary qualitative findings suggest that race and gender certainly work together to influence the sexual experiences of Black college women. For example, focus group participants reported that Black women must

be strategic in their sexual partnering practices or face ostracization from their peers. Due to the small sexual networks existing on their campus, the women believed they had to be careful not to amass a sizable number of sexual partners if they eventually desired a romantic relationship with a Black man. One participant remarked “I feel that Black women, we are so quick to be called hoe so fast. Men like to ask your body count and how many people you had sex with. I feel like it comes down harder on us”. The women agreed that Black men expected them to appear chaste and conservative in their sexual pursuits. As a result, women who are believed to have had multiple sexual partners are undesirable and deemed unsuitable romantic partners. Similarly, participants felt Black women are ostracized by other Black women for their sexual behavior. For example, some participants agreed that respectability among female peers is valued and sexual reputations can hinder or prohibit membership in predominantly black female social groups, such as sororities. A participant commented “If you’re out there hoe’ing around none of them [Black sororities] want you because it looks bad on them.”

As more discussion ensued, the participants acknowledged the sexual double standard facing college women of all races. Yet, several participants believed the stigmatization experienced by Black women is inherently different. It was mentioned that Black women are often hypersexualized and their bodies considered overdeveloped. Historically, these stereotypes have been used as indicators of Black women’s sexual practices. (Collins, 2004). As a result, these Black college women felt their bodies are policed in addition to their sexual behaviors. One participant stated “I have big boobs, so everything I wear is not going to cover up. It’s gonna show no matter how hard I try. I

can leave the house and look like a nun and later on that day everything is showing”. On the other hand, participants believed white women were more desirable if they exhibited physical characteristics often attributed to Black women. Large buttocks, thick thighs, and full lips are just some of the physical characteristics the participants mentioned. One participant commented that “White women are evolving...Black women have big butts and they are like thick around the thighs. But when a White girl has that it’s like everybody wants them.” Several participants believed these traits made White women more attractive sexual partners to Black men on campus.

Another topic of discussion was the gender ratio imbalance on campus. One participant jokingly stated, “I think there are less than 100 [Black men] on campus.” There were certainly more than 100 Black men attending the university, however Black women outnumbered Black men 2.5 to 1—in general, women outnumber men 2 to 1 on the campus. As a result, participants found it difficult to secure a suitable sexual or romantic partner. As one participant remarked, “It’s hard because they have so many options and they know they are the select few on campus.” Another participant commented, “Dudes have a lot of control”. It was believed that the gender ratio imbalance yielded men more power in the sexual market and bred competition among women seeking heterosexual partnerships. When asked about interracial partnering among Black women and men of other races as an avenue for sexual and romantic fulfillment, some participants insisted that interracial partnering was not an option for them. “Everybody here is pretty much segregated”, declared one participant. The participants agreed that social and sexual networks on campus were racially segregated

which made interracial partnering difficult. While they agreed that interracial dating was easier for Black men, some participants believed prevailing stereotypes about Black women, in addition to segregated networks, hindered men of other races from pursuing relationships with Black women. As one participant stated, “A lot of races don’t know how to approach a Black woman...Especially when she’s kind of like strong or very independent. They don’t really know how to connect with that.”

Moving Forward

Although data collection is still in progress at the time of publication, the preliminary focus group findings provide some social context to the quantitative results. It is expected that this data will further elucidate Black women’s experiences with romantic and casual sexual partnerships on college campuses. Considering findings from both phases of the study thus far, the larger structural factors of sexism and racism warrant further investigation, as they give meaning to ‘race’ and ‘gender’ and may provide clues as to how both social identities work to influence students’ sexual attitudes and condom use behaviors. Although college students’ sexual attitudes have gradually become more liberal, double standards regarding the appropriate sexual behavior of women persist on college campuses. Women are still often expected to be chaste, desire love, romance, and marriage and avoid casual sex outside the confines of committed partnerships. However, men are still often encouraged to pursue sexual opportunities regardless of the sexual and relationship context (Armstrong et al., 2014; Crawford & Popp, 2003; Gilmartin, 2006; Hamilton & Armstrong, 2009). Women who challenge this

double standard face stigmatization; thus, some women may feel it is in their best interest to conform to and uphold the double standard.

Likewise, sexism may also influence college women's condom use. Women outnumber men on US college campuses which affords men more power in negotiating partner selection and relationship formation (Jenkins Hall & Tanner, 2016). This power disparity puts women seeking heterosexual partnerships at a distinct disadvantage. Studies suggest power imbalances often lessen women's ability to negotiate condom use and discuss safer sex openly due to fear of rejection from their partners (Ferguson et al., 2006; Newsome et al., 2014).

Regarding race, current literature suggests that Black students have more positive attitudes toward casual sex than their white counterparts (Davidson et al., 2008). However, findings presented in paper 1 counter these assumptions of Black students' permissiveness toward casual sex—assumptions which were possibly influenced by long held racist and stereotypical beliefs regarding Black sexuality (Collins, 2004). Considering the long history of sexualized, racial oppression and stigma experienced by Blacks, it is possible that Black students exhibit more conservative attitudes to counteract sexual stereotypes and appear more respectable to their peers; this may be even more salient among Black students who attend predominantly White colleges and universities.

Even more, Black students' higher rates of condom usage should be encouraging to college health researchers and administrators. However, this population continually reports higher rates of STIs when compared to their White counterparts (Buhi et al., 2010; Centers for Disease Control and Prevention, 2016). Studies suggest these disparate

outcomes may be due largely in part to Black students limited sexual networks on college campuses (Alleyne & Wodarski, 2009; Buhi et al., 2010; Jenkins Hall & Tanner, 2016; McClintock, 2010). Black students are more likely to engage in racially homophilous partnerships (McClintock, 2010). These partnering preferences are partially fueled by Black students' attempts to avoid eroticization and racist stereotypes surrounding Black sexuality that paint Blacks as innately hypersexual and less desirable romantic partners (Collins, 2000, 2004; McClintock, 2010; Phua & Kaufman, 2003). Consequently, higher rates of intra-racial partnering in conjunction with higher rates of STIs among Black young adults, places Black students at greater risk for exposure to STIs.

Understanding that Black women are simultaneously Black and women, researchers should also push to understand how racism and sexism work together to exacerbate this population's sexual risk. These two identities cannot be disentangled; thus, the gendered racism experienced by Black college women must be considered. An intersectional approach to sexual health programming is needed to address STI disparities facing Black college women.

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APPENDIX A

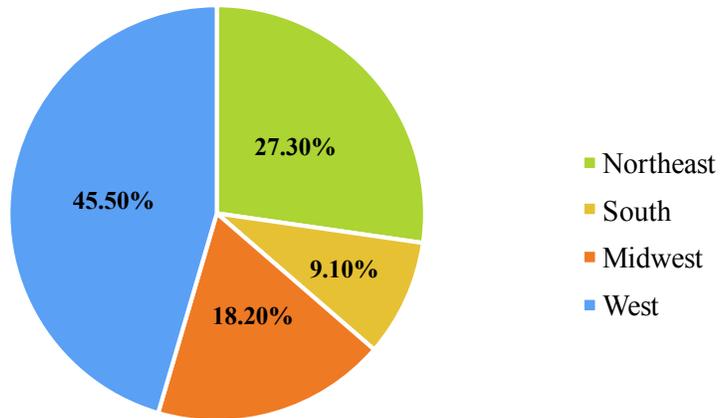
SCHOOLS REPRESENTED IN THE ONLINE COLLEGE SOCIAL LIFE SURVEY (OCSLS)

Institution	<i>N</i> (% of Sample)	Institution	<i>N</i> (% of Sample)
Beloit College	205 (0.9%)	Stanford University	1457 (6.0%)
Carroll College	160 (0.7%)	Stony Brook University	948 (3.9%)
The Evergreen State College	102 (0.4%)	University of Arizona	1515 (6.3%)
Foothill College	2631 (10.9%)	University of California, Merced	173 (0.7%)
Framingham State College	1052 (4.4%)	University of California, Riverside	1183 (4.9%)
Harvard University	182 (0.8%)	University of California, Santa Barbara	3084 (12.8%)
Indiana University	1115 (4.6%)	University of Illinois at Chicago	2027 (8.4%)
Ithaca College	545 (2.3%)	University of Massachusetts	3607 (15.0%)
Middle Tennessee State University	434 (1.8%)	University of Pennsylvania	487 (2.0%)
Ohio State University	1345 (5.6%)	University of Washington	587 (2.4%)
Radford University	110 (0.5%)	Whitman College	1182 (4.9%)

APPENDIX B

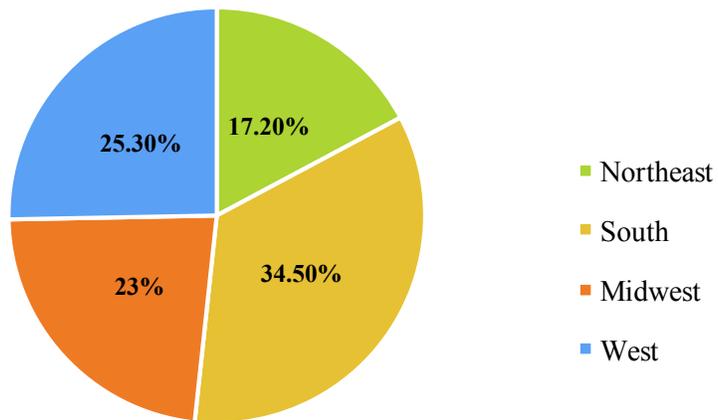
OCSLS AND US UNDERGRADUATE ENROLLMENT BY REGION

OCSLS Undergraduate Enrollment By Region



N= 24,131

US Undergraduate Enrollment By Region



N= 20,375,789

APPENDIX C

INDEPENDENT, CONTROL, AND OUTCOME VARIABLES EXAMINED IN THE STUDY

	Variable Name	Type of Variable	Levels (if categorical)
Independent Variables	Race	Dichotomous	<ul style="list-style-type: none"> • Black • White
	Gender	Dichotomous	<ul style="list-style-type: none"> • Male • Female
	Pre-hookup Relationship Intentions	Categorical	<ul style="list-style-type: none"> • Yes • No • Unsure
Control Variables	Age	Continuous	
	Age at first vaginal intercourse	Continuous	
	Student Classification	Categorical	<ul style="list-style-type: none"> • Freshman (first year) • Sophomore (second year) • Junior (third year) • Senior (fourth year) • 5th year or beyond (undergrad)
	Student Religious affiliation	Dichotomous	<ul style="list-style-type: none"> • Christian • Other Religious Affiliation • No Affiliation
	Fraternity/sorority membership	Dichotomous	<ul style="list-style-type: none"> • Yes • No
	Student athlete	Dichotomous	<ul style="list-style-type: none"> • Yes • No
	Student residence	Categorical	<ul style="list-style-type: none"> • On-campus • Off-campus • Parents • Other
Outcome Variables	Attitudes toward hookups	Continuous	
	Condom at last vaginal hookup	Dichotomous	<ul style="list-style-type: none"> • Yes • No