

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

ASSOCIATIONS BETWEEN SEXUAL BEHAVIOR AND SELF-ESTEEM AMONG
COLLEGE ATTENDING EMERGING ADULTS

KELSIE R. WALSH

SPRING 2013

A thesis
submitted in partial fulfillment
for a baccalaureate degree
in Human Development and Family Studies
with honors in Human Development and Family Studies

Reviewed and approved* by the following:

Eva S. Lefkowitz
Associate Professor of Human Development and Family Studies
Thesis Supervisor

Kathryn B. Hynes
Assistant Professor of Human Development and Family Studies and
Demography
Honors Adviser

Jennifer Maggs
Professor of Human Development and Family Studies
Faculty Reader

* Signatures are on file in the Schreyer Honors College

ABSTRACT

The majority of individuals are or become sexually active during emerging adulthood. Most past research on sexual behavior focuses on the risky aspects of sex and focuses predominantly on adolescents. Though understanding the negative outcomes and associations of sexual behavior in emerging adults is important, sexual behavior may not be solely a negative event. The present study attempts to explore associations between sexual behaviors and self-esteem in a college student sample ($N=744$). The average age of participants was 18.4 years. The sample consisted of 50.8% female participants. Regarding ethnicity, 25.1% of participants identified as Hispanic/Latino. With regard to race, 15.7% of non-Hispanic/Latinos identified as African American, 23.3% as Asian or Pacific Islander, 27.4% as European American, and 8.5% multiracial. The sexual behaviors assessed were ever having penetrative sex in the past 12 weeks, frequency of sex in the past 12 weeks, number of sexual partners in the past 12 weeks, and condom use in the past 12 weeks. Linear regressions were performed to examine associations between sexual behavior and self-esteem, which included interaction with gender and relationship status to examine potential moderating effects. Results revealed that having penetrative sex in the past 12 weeks was associated with higher self-esteem for male but not female students. In addition, having sex more frequently was associated with higher self-esteem for individuals in serious relationships, and with lower self-esteem for individuals who were not in serious relationships. It is possible that societal views on sexual behavior based on gender may influence emerging adults' self-esteem. Further, the type of relationship moderated the association between sexual behavior and self-esteem, suggesting that today's hook-up culture may not be healthy for emerging adults' wellbeing.

Keywords: sexual behavior, self-esteem, emerging adults, college students

TABLE OF CONTENTS

Abstract.....	i
List of Tables.....	iii
Acknowledgements	iv
Introduction	1
The Developmental Period of Emerging Adulthood.....	1
Sexual Behavior Among Emerging Adults	2
Sexual Behavior Outcomes.....	2
Penetrative Sex.....	3
Multiple Sexual Partners.....	4
Condom Use.....	4
Gender Differences Regarding Sexual Behavior.....	5
Relationship Status in Emerging Adulthood.....	7
Self-Esteem.	8
Hypotheses	9
Methods	12
Participants	12
Measures	13
Results	15
Discussion	18
References	25

LIST OF TABLES

Table #		Page #
1	Linear Regression of Association Between Penetrative Sex in the Past 12 Weeks (Ever) and Self-Esteem, With Gender as a Moderator	32
2	Linear Regression of Association Between Frequency of Penetrative Sex in the Past 12 Weeks and Self-Esteem, With Gender as a Moderator	33
3	Linear Regression of Association Between Penetrative Sex in the Past 12 Weeks (Ever) and Self-Esteem, With Relationship Status as a Moderator	34
4	Linear Regression of Association Between Frequency of Penetrative Sex in the Past 12 Weeks and Self-Esteem, With Relationship Status as a Moderator	35
5	Linear Regression of Association Between Number of Sexual Partners in the Past 12 Weeks and Self-Esteem, With Gender as a Moderator	36
6	Linear Regression of Association Between Number of Sexual Partners in the Past 12 Weeks and Self-Esteem, With Relationship Status as a Moderator	37
7	Linear Regression of Association Between Condom Use in the Past 12 Weeks and Self-Esteem, With Gender as a Moderator	38
8	Linear Regression of Association Between Condom Use in the Past 12 Weeks and Self-Esteem, With Relationships Status as a Moderator	39

ACKNOWLEDGEMENTS

I would first like to thank my thesis supervisor, Eva Lefkowitz. Eva worked with me throughout this entire process, always being patient and extremely helpful. I learned so much about research, writing, and myself from working on this project. It has been an honor working with and learning from you.

I would also like to thank Jennifer Maggs for agreeing to be my second reader and giving me invaluable feedback on my thesis.

I would also like to thank Megan Maas, Emily Waterman, and Rose Wesche for their support and suggestions throughout this thesis process.

I would also like to thank everyone on the University Life Study for letting me be a part of it and teaching me so much about research in general.

To my family and friends, thank you so much for all of your support throughout this process. You were all always there for me whether I needed a boost or to be calmed down. I cannot thank you all enough for your love and encouragement.

Last but not least, I would like to thank my honors advisor, Dr. Kate Hynes, for being with me throughout this entire honors process and for always being so helpful whenever I needed. I had a great experience in the honors college learning and taking guidance from Dr. Hynes.

INTRODUCTION

The majority of emerging adults are sexually active. By ages 20-24 years, 85% of women and 82% of men have had vaginal sex in their lifetime (Chandra, Mosher, & Copen, 2011). Moreover, by age 18, the beginning of emerging adulthood, over half of individuals are sexually active (Chandra et al., 2011). The majority of past research focuses on adolescents' risky sexual behavior including the possibility of pregnancy and STIs, as well as the potential emotional distress that sexual behavior may cause adolescents, or individuals 10-18 years old (Arnett, 2004). Although this research is useful for understanding this period of development and informing interventions with adolescents, more research on sexual behavior as a normative behavior in emerging adulthood is needed. Accordingly, sexual behavior has recently been recognized as a more normative, developmental aspect of life (Lefkowitz & Gillen, 2006). Thus, it is important to understand not only negative outcomes of sex but also positive outcomes. This paper explores the possibility that sexual behavior in emerging adults may not be solely a negative event, but may be associated with positive wellbeing. In particular, depending on one's relationship status, gender, and type of sexual behavior, sex may not be as risky or damaging for individuals' self-esteem in emerging adulthood as previously thought; sexual behavior may have positive associations with emerging adults' wellbeing.

The Developmental Period of Emerging Adulthood

Arnett (2000) coined a term for a new developmental state, emerging adulthood, as a time when young people explore various parts of their life such as love, work, and identity. Specifically, emerging adulthood is the period between adolescence and adulthood, or approximately ages 18-25 years (Arnett, 2000). This developmental period is defined in large part by freedom and independence. Individuals in this stage are most likely living away from

home and therefore making their own lifestyle decisions on a day-to-day basis. College is one context that supports the period of emerging adulthood. According to the Bureau of Labor Statistics (2011), about 68% of 2011 high school graduates were enrolled in college in October of 2011. Furthermore, in addition to possibly no longer living with parents or guardians, many emerging adults do not marry or become parents until their late twenties and early thirties, (U.S. Census Bureau, 2010), leaving a large window for freedom and exploration. Sexual behavior is, for many individuals, a part of this exploration; it is a normative and important developmental experience (Lefkowitz & Gillen, 2006).

Sexual Behavior Among Emerging Adults

As stated, the majority of emerging adults are sexually active. Given that many emerging adults are college students, it is important to examine sexual behavior rates within this context. Upon entering their first year of college, about half of students are sexually active. By 20-29 years of age, about 90% report having had penetrative vaginal intercourse (Fryar et al., 2007). Thus, the college years represent the onset of sexual behavior for many emerging adults.

Sexual Behavior Outcomes

Sexual self-esteem has been defined as “one's affective reactions to the subjective appraisals of one's sexual thoughts, feelings, and behavior” (Zeanah & Schwarz, 1996). Individuals who have better sexual self-esteem tend to be more sexually satisfied (Menard & Offman, 2009). Women with higher self-esteem report somewhat better sexual functioning than women with lower self-esteem (Rehbein-Narvaez, Vasquez & Madson, 2006). Sexual behavior can have various health benefits, in that “sexual health is inextricably bound to both physical and mental health” (Satcher, 2001, p. 1). For example, sexual behavior is directly related to better overall cardiovascular health (Brody & Preut, 2003; Brody, Veit & Rau, 2000). Research on

neuroendocrine factors during sex indicate that the pronounced increase in prolactin after an orgasm may be involved in feelings of satisfaction or gratification (Brody, 2003). This finding may indicate that an orgasm leads to positive feelings due to central processes and dopamine levels (Diamond & Huebner, 2012). Thus, sexual behavior is associated with multiple components of wellbeing: physical, mental, and emotional.

Penetrative Sex

Although sexual behavior comes with risks, such as unwanted pregnancy or STIs, some research in the past decade has considered sexual behavior as normative developmental behavior (Tolman & McClelland, 2011). Recent studies suggest that in addition to negative consequences, sexual behavior may be positively correlated with individuals' wellbeing (Diamond & Huebner, 2012). For instance, sexually active college students feel better about their appearance and are less dissatisfied with their bodies than abstinent students (Gillen, Lefkowitz, & Shearer, 2006). It is possible this association exists because body satisfaction and acceptance are associated with self-esteem (Forbes, Doroszewicz, Card, & Adams-Curtis, 2004).

Much of the research on non-physical outcomes of adolescent sex focuses on the negative outcomes of first intercourse (often for girls); however, first intercourse is generally perceived as a more positive than negative experience by both male and female adolescents (O'Sullivan & Hearn, 2008). Hooking up, defined as a sexual experience (ranging from kissing to penetrative sex) that occurs once between partners who do not necessarily expect future commitment or a relationship, has become common among college students (Owen & Fincham, 2011). Both men and women report that their emotional reactions to hook-ups during college were more positive than negative; however, compared to women, men report more positive and less negative emotional reactions (Owen & Fincham, 2011). Furthermore, male and female adolescents report

more positive and less negative affect when reporting their mood after sex than when reporting after a random experience (Shrier, Shih, Hacker & Moor, 2007). Thus for some young people, depending on the type of sexual behavior and type of relationship, sex may provide a positive experience and may have positive implications for wellbeing.

Multiple Sexual Partners

In addition to whether an individual is sexually active or not, another aspect of sexual behavior is having multiple sexual partners, or being sexually active with more than one individual in a certain amount of time. Research indicates that among middle and high school students, reporting high depressive symptoms was associated with having multiple sexual partners (Lehrer, Shrier, Gortmaker, & Buka, 2006). In addition, more emotional distress in female adolescents was associated with having had more sexual partners per year (Ethier et al., 2006).

Most of the research regarding sexual behavior with multiple partners revolves around gender differences. Men are more likely to report being sexually active with multiple partners than women are (O'Sullivan, Hoffman, Harrison & Dolezal, 2006). Some researchers have attributed this behavior to gendered double standards, where it is more acceptable for men to have sex with multiple partners than it is for women (Wade & Heldman, 2012). Thus, being sexually active with more partners may be associated with more positive aspects for male emerging adults, but with less positive aspects for female emerging adults.

Condom Use

Regardless of the type of partner an individual is sexually active with, his or her self-esteem may also be affected by his/her protective behaviors. Condom use is an important protective behavior given its role in preventing pregnancy and sexually transmitted infections

(STIs). Although condoms have become more available and acceptable in society, many individuals continue to have sex without them (Blake et al., 2003). One study found that only 60% of college students had used condoms as a method of protection at all in the last 6 months. Moreover, less than half definitely intended to use condoms in the next month (Beckman, Harvey, & Tiersky, 1996). Thus, condom use among college students remains inconsistent.

Adolescents who engage in risky sex, such as unprotected sex or sex with multiple partners, report more stress than individuals who engage in safer sex (Ethier et al., 2006). More stress in college students is associated with lower self-esteem (Abouserie, 1994). When individuals do not use protection, they are more likely to have negative feelings about themselves, such as feeling guilty or worrying about health, and the sexual encounter (Vasilenko, Lefkowitz, & Maggs, 2011; Wulfert & Wan, 1993). Moreover, female emerging adults who have sex without protection report feeling regretful. Research found that men reported being less worried about contracting STIs or impregnating their partner when they used condoms, thus reducing their negative emotional reactions (Owen & Fincham, 2011). These past studies suggest that condom use may be associated with wellbeing.

Gender Differences regarding Sexual Behavior

Gender is an important moderator to consider when examining emerging adults' behavior. Research on adolescents has found that gender moderates various associations regarding sexual behavior and wellbeing, thus it is possible that gender moderation is also present among emerging adults. Although research suggests that sexual behavior can be positive for both male and female individuals, it is possible that sexual behavior is more positive for male than for female emerging adults. For instance, male college students' body satisfaction increases after they transition to first intercourse, whereas female college students' body satisfaction

decreases slightly (Vasilenko, Ram, & Lefkowitz, 2011). Furthermore, male college students are more likely to report feeling physically and psychologically satisfied by first intercourse than female students (Darling, Davidson, & Passarello, 1992).

Although individuals' number of sexual partners in a certain amount of time may be associated with aspects of wellbeing, some research suggests there may be gender differences in these associations. For example, male emerging adults who have sex with more partners have more positive feelings toward their body than male emerging adults who had fewer partners (Gillen et al., 2006). Female college students, on the other hand, are more likely to experience guilt and negative affect after sexual behavior than male college students (Vasilenko, Lefkowitz, & Maggs, 2011). Although a direct association has not been found between having multiple partners and self-esteem, emotional distress is associated with number of sexual partners for adolescent girls (Ethier et al., 2006). Furthermore, sexually active male college students not in a serious relationship show the fewest depressive symptoms, whereas female college students who engaged in intercourse outside of a serious relationship report the most depressive symptoms compared to all other male and female emerging adults in the college student sample (Grello, Welsh, & Harper, 2006).

Gender differences have also been found for the association between condom use and wellbeing. For instance female college students who report being in a negative mood state and report lower self-esteem are more likely to intend to have sex without a condom compared to those in a negative mood state with higher self-esteem. This finding indicates that self-esteem has more of an association with sexual health decisions than a temporary negative mood state (MacDonald & Martineau, 2002). Further, there is an association between non-use of birth control and "feeling depressed/stressed" among sexually active female adolescents (Ethier et al.,

2006). Another study found an association between male emerging adults' unprotected sex and high body satisfaction (Gillen et al., 2006). College-aged women who were STI-negative and practiced safe-sex behaviors such as condom use, showed higher self-esteem than their STI-positive counterparts (Gardner & Amankwaa, 1998). These past studies suggest associations between protective sexual behaviors and wellbeing.

Relationship Status in Emerging Adulthood

Whether or not emerging adults are in a romantic relationship can be a crucial factor in understanding sexual behavior and its associations with wellbeing. Sexual behavior is associated with individuals' self-esteem differently based on how much "love" they perceive from their significant other (Walsh, 1991). It is possible that the nature of a sexual relationship moderates the associations between various sexual behaviors and self-esteem.

Physical pleasure from sex is associated with emotional satisfaction (Richters, Grulich, Vissor, Smith, & Rissel, 2003). Individuals in relationships may be more likely to have emotional satisfaction and thus sexual pleasure. Non-relationship sex is associated with negative psychological outcomes in adolescents and emerging adults; college students who engage in sexual behavior with a non-dating partner are more likely to report negative intrapersonal consequences such as feeling guilty (Goodson, Buhi, & Dunsmore, 2005; Grello et al., 2006; Vasilenko, Lefkowitz, & Maggs, 2011). In particular, female college students, who engage in non-relationship intercourse, have more depressive symptoms than those who do not (Grello et al., 2006). The type of relationship also influences the number of sexual partners' associations with self-esteem. Individuals who are in a committed relationship but have multiple partners, that is, engage in infidelity, experience guilt and emotional distress (Berman, 2006). Other evidence suggests that self-esteem is higher for college students who are not involved in dating

infidelity than for students who are (Sheppard, Nelso, & Andreoli-Mathie, 1995). These past findings suggest that the type of relationship that the sexual behavior occurs in affects how the sexual behavior is associated with wellbeing.

Relationship status is a crucial factor in individuals' decision to have sex without condoms. Wellbeing among individuals in relationships is influenced by the protective actions taken when having sexual intercourse (Furman, Brown, & Feiring, 1999; Wendt & Soloman, 1995). Individuals in relationships may decide not to use condoms because they are using another form of contraception such as the pill (Raj & Pollack, 1995; Santelli, Davis, Celentano, Crump, & Burwell, 1995). Male and female college-aged individuals who report being non-condom users, in a current steady relationship, and using other contraceptives (oral), are much more likely to also report low perceived need to use condoms (Wendt & Soloman, 1995). On the other hand, individuals who are not in a relationship and engage in sex are more likely to consistently use condoms (Raj & Pollack, 1995). To my knowledge there has not been past research regarding the emotional outcomes of uncommitted, unprotected sex; we hypothesize that these individuals will experience more stress than those in relationships.

These past findings indicate that relationships status moderates the association between difference sexual behaviors, such as frequency of sex, number of sexual partners, and condom use, and self-esteem.

Self-Esteem

Self-esteem is associated with how individuals feel, how they think, and how they behave (Kling, Hyde, Showers, & Buswell, 2009). Individuals with higher self-esteem are more confident, resilient, and ambitious about achieving their goals. Over time, self-esteem has become an increasingly popular research topic (Ethier et al., 2006; Fennell, 2007; Luhtanen &

Crocker, 1992). Positive regard for the self has long been viewed as an essential component of mental health (e.g., Rogers, 1961; Taylor & Brown, 1988). Low self-esteem leads to increased vulnerability to emotional disorders (Fennell, 2007). It is crucial that we consider self-esteem when researching emerging adults. Often times, individuals' self-esteem is an underlying reason and/or outcome for both their healthy and their risky behavior. It is possible that self-esteem has associations with sexual behavior; exploring this possibility is important for understanding emerging adults more fully so that we can push for positive wellbeing regarding sexual development in emerging adults.

HYPOTHESES

The current study examines whether college students' sexual behavior is related to their self-esteem. We were also interested in possible moderating effects of gender and relationship status.

First intercourse is generally reported to be a more positive experience than a negative one, and sexually active college students feel better about their appearance and therefore less dissatisfied with their bodies than their fellow abstinent college students (Gillen et al., 2006; O'Sullivan & Hearn, 2008). Furthermore, adolescents report more positive affect after having sex than after a random event (Shrier et al., 2007). Therefore, the first hypothesis was:

1. Participants who ever had penetrative sex in the past 12 weeks, and who had more frequent sex in the past 12 weeks, will have higher self-esteem than those who did not.

After first intercourse, there is a larger increase in body satisfaction for male than for female individuals (Vasilenko et al., 2011). Also, male college students are more likely to report feeling physically and psychologically satisfied by first intercourse than female students (Darling et al., 1992). Therefore, we predict that although sexual behavior will be positively associated

with self-esteem for both male and female emerging adults, the association will be stronger for male emerging adults. The second hypothesis was:

2. Gender will moderate the association between sexual behavior in the past 12 weeks and self-esteem. The association between sexual behavior and self-esteem will be stronger for male than for female participants.

Individuals in relationships are more likely to report emotional satisfaction and therefore sexual pleasure than those not in relationships. Sexual behavior outside of a relationship is associated with negative psychological outcomes such as feeling guilty (Richters et al., 2003; Grello et al., 2006; Vasilenko et al., 2011). Thus, the third hypothesis was:

3. Relationship status will moderate the association between sexual behavior and self-esteem. The association will be stronger for participants in relationships than for those not in relationships.

Depressive symptoms may be associated with having multiple sexual partners (Lehrer et al., 2006). Therefore, the fourth hypothesis was:

4. Participants who had more sexual partners in the past 12 weeks will have lower self-esteem.

Having multiple sexual partners is associated with depressive symptoms for both male and female individuals, however this association may vary by gender. Male adolescents with more sexual partners tend to feel better about their bodies, whereas female adolescents tend to feel guilty and have emotional distress when sexually active with multiple people (Gillen et al., 2006; Vasilenko et al., 2011; Ethier et al., 2006; Grello et al., 2006). Thus, the fifth hypothesis was:

5. Gender will moderate the association between number of sexual partners in the past 12 weeks and self-esteem. The association will be stronger for female than male participants.

Emotional distress frequently occurs when individuals are unfaithful to their partners (Berman, 2006). College students who are involved in dating infidelity have lower self-esteem than those who do not (Sheppard et al., 1995). Hence, the sixth hypothesis was:

6. Relationship status will moderate the association between number of sexual partners and self-esteem. The association will be stronger for participants in relationships than those not in relationships.

Individuals who engage in risky sex and do not use contraception report more stress and negative feelings such as guilt and worry (Ethier et al., 2006; Vasilenko et al., 2011). Therefore, the seventh hypothesis was:

7. More frequent condom use in the past 12 weeks will be associated with higher self-esteem.

Gender differences have been found in contraception use. Female college students who do not intend to use a condom report lower self-esteem (MacDonald & Martineau, 2002). On the contrary, male emerging adults who have unprotected sex often report feeling positive about their appearance (Gillen et al., 2006). Thus, the eighth hypothesis was:

8. Gender will moderate the association between condom use and self-esteem. The association between condom use and self-esteem will be stronger for female than for male participants.

Individuals in relationships report that they do not always use condoms but use another form of contraception such as the pill (Raj & Pollack, 1995; Santelli et al., 1995). Furthermore,

individuals who are having sex but not in a relationship are more likely to report consistent condom use (Raj & Pollack, 1995). Hence, the ninth hypothesis was:

9. Relationship status will moderate the association between condom use and self-esteem.

The association will be stronger for those not in a relationship than those in a relationship.

METHODS

Participants

Data were drawn from the University Life Study (ULS), a longitudinal study focusing on sexual behavior and alcohol use among students at a large northeastern university. Participants had to be a US citizen or permanent resident, age 16 to 20, in their first year of college. The participants could not turn 21 during the first wave of data collection in order to participate in this study. Recruitment oversampled students from ethnic/racial minority backgrounds. Eligible students were mailed an invitation to participate in the study, which included an information letter about the study, a pen, and a \$5 cash pre-incentive. Five days later the participants received an email invitation with a link to the web survey. Along with the \$5 pre-incentive, there was a \$20 incentive to complete the first survey.

In total, 744 students completed the first semester survey. After the initial semester survey, participants completed surveys for six subsequent semesters. The present study used data from the first semester (Semester 1).

At Semester 1, the mean age of participants was 18.4 years ($sd = 0.4$). The sample was 50.8 % female. Regarding ethnicity, 25.1% of participants identified as Hispanic/Latino. With regard to race, 15.7% of non-Hispanic/Latino participants identified as African American, 23.3% identified as Asian or Pacific Islander, 27.4% identified as European American, and 8.5% multiracial. When asked about sexual orientation, 98.1% identified as heterosexual, 0.5% as

homosexual, 1.2% as bisexual, and 0.1% as other. Six percent of the participants' mothers did not complete high school, 35.3% completed high school, 34.5% completed college, 22.8% completed graduate school, and 1.9% did not report their mothers' education. In regard to fathers, 8.3% did not complete high school, 29.1% completed high school, 28.1% completed college, 29.7% completed graduate school, and 4.7% did not report their fathers' education.

Measures

Participants answered demographic questions about their gender, ethnicity, race, sexual orientation, and parental education.

Penetrative Sex/Frequency of Penetrative Sex (12 weeks)

We determined participants' *penetrative sex in the past 12 weeks* based on their response to the question, "In the past 12 weeks, on how many occasions have you had vaginal and/or anal sex?" We coded responses of 0 occasions as 0 (not having sex in the past 12 weeks), and recoded all other numbers of occasions (1 or more) as 1 (yes, had sex in the past 12 weeks). About 35% of participants had penetrative sex in the prior 12 weeks. Responses to this question included the whole sample ($N=744$).

We used the same questions to determine participants' *frequency of penetrative sex in the past 12 weeks*. Only responses of participants who responded yes to having sex ever in their lifetime were used in this question ($N=357$). Participant responses ranged from 0 to 100 occasions of penetrative sex in the past 12 weeks. We recoded responses that were over 100 to 100 (3 participants' responses). The mean for frequency of sex was 8.8 occasions in the past 12 weeks ($sd= 15.3$).

Number of Partners (12 weeks)

Participants' number of partners was asked with two questions, "In the past 12 weeks, how many different FEMALE partners have you had vaginal and/or anal sex with?" and a second question about MALE partners. Responses of participants who reported having sex in their lifetime were used for these questions ($N=360$). Participant responses ranged from 0 to 12. The total number of MALE/FEMALE partners was then summed in order to have one measure of sexual partners. The mean of responses for number of partners was 1.06 ($sd= 1.3$).

Condom Use (12 weeks)

Participants who reported having had penetrative sex in the past 12 weeks ($N=276$) were also asked about several additional behaviors, including condom use, in the past 12 weeks. Participants answered the question, "In the past 12 weeks, how frequently have you used a condom when you had vaginal and/or anal sex?" Participants responded on a five-point scale: "never" (0), "almost never" (1), "most of the time" (2), "every time except once" (3), and "every time" (4). The response mean was 2.6 ($sd = 1.6$).

Self-Esteem

We assessed participants' self-esteem with the 10-item scale Rosenberg (1965) self-esteem scale. The scale included statements such as, "I am a useful person to have around," and "I feel I do not have much to be proud of." Participants answered using a five-point scale: "never true" (0), "not often true" (1), "sometimes true" (2), "often true" (3), and "almost always true" (4). We reverse coded three items to make all participant responses be in the same direction (higher scores indicate greater self-esteem), and then calculated the mean. The response mean for this sample was 3.1 ($sd = 0.5$).

Romantic relationship status

We determined romantic relationship status by asking participants “which of the following best describes you right now?” We dichotomized the participant responses into “not in a serious relationship” (0), which included individuals who responded that they were either not dating anyone or casually dating someone vs. “in a serious relationship” (1), which included those who responded that they were in a committed relationship, living with a partner, engaged, or married. All participants in the study responded to this question; 35.3% reported being in a serious relationship.

RESULTS

We conducted a series of eight linear regressions to determine whether self-esteem was associated with sexual behavior. The dependent variable was self-esteem. In the first step, we entered one of the four sexual behavior variables to test for main effects of sexual behavior on self-esteem (Hypotheses 1, 4, & 7). In the second step, we entered gender (or relationship status), and the interaction between gender (or relationship status) and the sexual behavior variable, to test for moderation (Hypotheses 2, 3, 5, 6, 8, & 9). We created interaction variables by multiplying gender (coded as 0=female, 1=male) or relationship status (coded as 0=not in a serious relationship, 1=in a serious relationship) by the sexual behavior variable to test if there were moderating effects of gender and relationship status on the four different sexual behaviors.

The first hypothesis was that participants who ever had penetrative sex in the past 12 weeks, and who had more frequent sex in the past 12 weeks, would have higher self-esteem than those who did not. Step 1 of the regression to test whether past 12 week sexual behavior was associated significantly with self-esteem (see Table 1) indicated that participants who had penetrative sex in the past 12 weeks tended to have higher self-esteem than those who did not

have sex. Step 1 of the regression with frequency of sex in the past 12 weeks was not significant (see Table 2), indicating no main effect of frequency of sex on self-esteem. Thus, hypothesis 1 was partially supported.

The second hypothesis was that gender would moderate the association between sexual behavior in the past 12 weeks and self-esteem, with the association between sexual behavior and self-esteem stronger for male than for female participants. Step 2 (in which the interaction between ever having sex and gender was added) of the regression with ever having penetrative sex in the past 12 weeks was significant, as was the interaction in this step (see Table 1). To follow up on this interaction, we performed follow-up regressions separately by gender. There was a significant association for male participants. Young men who had penetrative sex in the past 12 weeks tended to have higher self-esteem ($\beta = .17, p < .001$), but this association was not significant for female participants ($\beta = .01, p > .05$). Step 2 of the regression to examine whether gender moderated the association between frequency of penetrative sex and self-esteem was not significant (see Table 2). Thus, hypothesis 2 was partially supported.

The third hypothesis was that relationship status would moderate the association between sexual behavior and self-esteem, with the association stronger for participants in relationships than for those not in relationships. Step 2 of the regression to examine ever having penetrative sex in the past 12 weeks was not significant, indicating no moderating effect (see Table 3). Although Step 2 in the regression to frequency of sex was not significant, the interaction term was significant, and thus should be interpreted with caution (see Table 4). We ran follow-up regressions separately by relationship status to understand the moderating role of relationship status. Although neither was significant, the betas for frequency of sex were in opposite directions for those in serious relationships versus those not in serious relationships. Among

students in serious relationships, having more frequent penetrative sex was associated with higher self-esteem ($\beta = .15, p > .05$), whereas among students not in serious relationships, more frequent sex was associated with lower self-esteem ($\beta = -.09, p > .05$). Thus, hypothesis 3 was partially supported.

The fourth hypothesis was that participants who had more sexual partners in the past 12 weeks would have lower self-esteem. Step 1 of the regression to test the number of sexual partners in the past 12 weeks was not significant (see Table 5). Thus, hypothesis 4 was not supported.

The fifth hypothesis was that gender would moderate the association between number of sexual partners in the past 12 weeks and self-esteem. Step 2 of the regression with number of partners in the past 12 weeks was not significant (see Table 5). Thus, hypothesis 5 was not supported.

The sixth hypothesis was that relationship status would moderate the association between number of sexual partners and self-esteem. Step 2 of the regression to examine the moderating effect of relationships status on the association between number of partners and self-esteem was not significant (see Table 6). Thus, hypothesis 6 was not supported.

The seventh hypothesis was that more frequent condom use in the past 12 weeks would be associated with higher self-esteem. Step 1 of the regression with condom use was not significant (see Table 7). Thus, hypothesis 7 was not supported.

The eighth hypothesis was that gender would moderate the association between condom use and self-esteem. Step 2 of the regression to test condom use was not significant (see Table 7). Thus, hypothesis 8 was not supported.

The ninth hypothesis was that relationship status would moderate the association between condom use and self-esteem. Step 2 of the regression to examine the moderating effect of relationships status on the association between condom use and self-esteem was not significant (see Table 8). Thus, hypothesis 9 was not supported.

DISCUSSION

Engaging in recent penetrative sex was associated with higher self-esteem, and this association was moderated by gender. Having sex was associated with higher self-esteem for male college students, but not for female college students. These results direct our attention to the gender double standard; society expects men to be more sexually active, (having more sexual partners and having a higher frequency of sex) whereas the same sexual behaviors for women are frowned upon (Greene & Faulkner, 2005). Previous research found that the reputations of girls and women ages 10-25 might be damaged by sexual behavior. To be specific, being branded a “slut” may lead to social isolation (Marston & Kling, 2006). Further, it is possible that male emerging adults socially benefit from more sexual behavior whereas female emerging adults may be made more vulnerable and looked down upon (Heldman & Wade, 2010). Thus, individuals’ self-concept and self-esteem may differ based on their gender and how society either validates or disproves their behavior. A meta-analysis collected about gender differences and body image showed dramatic increases in the number of women who have poor body image over the last fifty years (Feingold & Mazzella, 1998). Previous research has indicated that male emerging adults’ body satisfaction increases after they transition to first intercourse, whereas female emerging adults’ body satisfaction decreases slightly (Vasilenko, Lefkowitz, & Ram, 2011). Furthermore, male college students are more likely to report feeling physically and psychologically satisfied by first intercourse than female students are (Darling et al., 1992).

Female adolescents, on the other hand, more often have issues with guilt and negative affect due to sexual behavior (Vasilenko, Lefkowitz, & Maggs, 2011). These findings suggest that female emerging adults' sexual behavior is not as strongly associated with positive characteristics as male emerging adults' sexually behavior is. Our results, that male emerging adults' penetrative sex is associated with higher self esteem, and that female emerging adults' penetrative sex is not associated with higher self esteem, add to the literature regarding the gender double standard surrounding sexual behavior in our society.

In the current study, we found that more frequent sex among individuals in serious relationships was associated with better self-esteem, whereas more frequent sex for individuals not in serious relationships was associated with lower self-esteem. Past research has suggested that individuals in relationships report more emotional satisfaction and sexual pleasure (Richters et al., 2003). It is possible that the satisfaction associated with sex for individuals in relationships is tied closely to emerging adults' self-esteem and wellbeing. In addition, research has indicated that sexual behavior outside of relationships is associated with negative psychological outcomes such as guilt (Vasilenko, Lefkowitz, & Maggs, 2011). These findings about relational and non-relational sexual behavior have potential implications for the current hook-up culture among college students. One study on college students found that about 76% of senior college students had hooked-up (had a sexual encounter with an uncommitted partner) during college (England, Shafer & Fogarty, 2007). The prevalence of hooking up brings attention to what this behavior means for the wellbeing of emerging adults. Other evidence indicates that although hook-ups are considered to be casual encounters, the main motivation emerging adults report for hooking up is that there is potential to form a relationship. Of those individuals who had hooked-up, 51% had done so with the intention of starting a relationship

(Garcia & Reiber, 2008). A different study, which also explored the motivations for hooking up, found a slight gender difference for the relationship motivation, in that female emerging adults were slightly more likely to report hooking-up for the possibility of a relationship than male emerging adults were. These hook-ups, however, very rarely led to relationships; only 6% reported their hook-up transitioning to a relationship (Armstrong & Hamilton, 2009). Our results suggest that having more frequent sex while not in a serious relationship is associated with lower self-esteem. Thus, it is possible that the hook-up culture has a negative impact on emerging adults' wellbeing.

The association between sexual behavior and wellbeing may be influenced by the nature of the relationship that the sexual behavior occurs in. First of all, sexual and relationship satisfaction are positively associated (Lewandowski & Schrage, 2010), suggesting that individuals who are sexually active in a committed relationship may be more comfortable and have a better sense of security. Sexual behavior affects male and female individuals' self-esteem differently based on how much "love" they perceive from their significant other (Walsh, 1991). It is possible that being sexually active in a committed relationship positively affects emerging adults self-esteem. More than 60% of male college students and more than 80% of female college students preferred a committed relationship as opposed to an uncommitted sexual relationship (Garcia & Reiber, 2010). These past findings are aligned with our results, indicating that more sexual frequency is associated with higher self-esteem for individuals in relationships and lower self-esteem for individuals engaging in casual, non-relationship sex.

In contrast to hypotheses, number of sexual partners was not associated with self-esteem. Previous research, which has focused on adolescents, has stressed the negative outcomes of sexual behavior (Darling et al., 1992; Ethier et al., 2006; Goodson et al., 2005). One possibility

is that sex is a normative part of development, and not necessarily harmful to wellbeing in emerging adulthood. Recently, sexual behavior in emerging adulthood has been recognized as developmental and normative (Lefkowitz & Gillen, 2006). It is possible that sexual behavior is more complex than being simply a positive or negative aspect of development. Our study suggests that sexual behavior in emerging adulthood is multifaceted, at times showing neither positive nor negative associations with self-esteem.

There was not a significant association between condom use and self-esteem. Past research has found that engaging in risky sexual behavior often leads to stress in adolescents (Ethier et al., 2006). It has been suggested that stress is more of an immediate state of being whereas self-esteem is a more set trait (Caruthers, 1998). It is possible that having unprotected sex may be associated with stress, or an immediate feeling of worry, but an individual's self-esteem is not associated with condom use. This could be because feeling positively about oneself does not mean an individual will make positive protective decisions. Past research has even found that male college students who feel positively about their appearance are more likely to report risky sexual behavior (Gillen, et al., 2006). These results could be significant for intervention and prevention programs. Educators and parents should be aware that individuals' wellbeing does not appear to be directly associated with their use of protection. Future studies should look into what aspects, such as education or availability, in adolescents' and emerging adults' lives are associated with condom use.

There are several limitations to the current study. First, data were drawn from one time point, and therefore are solely correlational. We cannot determine any temporal ordering with these analyses. Future studies should include longitudinal data to observe long term associations as well as the temporal ordering of changes in sexual behaviors and self-esteem. A second

limitation is that the sample for these analyses included only college students. Results could differ for a more nationally representative sample, including emerging adults who are not attending college. The college setting provides a place with many people who are the same age and possibly looking for similar experiences. Alcohol use, experimentation, and exploration are often a main part of college life (Grello et al., 2006). The opportunity and intentions for sexual behavior may differ for individuals still living at home or working outside of a college town. Furthermore, this sample only included first semester freshmen. Responses on the survey could differ for older college students. The prevalence of individuals engaging in sex increases from freshman year to senior year. About half of first year college students report being sexually active at the start of college whereas about 90% of 20-29 year olds report having penetrative sex (Fryar et al., 2007; Patrick & Lee, 2010). It is possible that these numbers increase because older college students may be of legal age to consume alcohol and/or because the opportunity for sex has increased. Therefore findings could vary if this study was performed on older college students. Another limitation is that the measurement of self-esteem is only one aspect of wellbeing. The wellbeing of emerging adults is multifaceted, and therefore future research should measure additional wellbeing aspects to gain a more complete understanding of the associations between sexual behavior and wellbeing. For example, future studies should look into associations between sexual behavior and emerging adults' psychological or emotional health, mood or affect, or their interpersonal relationships. Lastly, future studies should focus on other possible moderators between sexual behavior and self-esteem or wellbeing, such as future goals, motivations for sex, and religious beliefs. It is possible that the associations between sexual behaviors and self-esteem would differ by how goal oriented and individual is. The motivations behind emerging adults' sexual behavior should also be explored further.

Individuals' perceptions and expectations of the sexual behavior may be associated with their wellbeing. Past research has also found a correlation between sexual behavior and religion, specifically that religious involvement delays sexual onset (Rostosky, Wilcox, Wright, & Randall, 2004). It is possible that strict religious beliefs or practices can affect the association between individuals' sexual behavior and how they feel about themselves. Being taught that sexual behavior before marriage is wrong can strengthen how engaging in sexual behavior may be associated with lower self-esteem. It would be beneficial to look into how religious upbringing and pressures cause the association between sexual behavior and wellbeing in emerging adults to differ.

Despite these limitations, this study contributes to sexual health research in several ways. The results advance the research on sexual behavior in emerging adulthood, by exploring both possible positive and negative associations between sexual behavior and self-esteem. Recent penetrative sex was associated with higher self-esteem for male emerging adults, but not female emerging adults, suggesting a gender difference in how sex is experienced. Furthermore, our findings advance the literature about sexual behavior, self-esteem, and relationship status. More frequent sex was associated with higher self-esteem for individuals in committed relationships, but with lower self-esteem for individuals not in serious relationships. We also added to the research about normative sexual behavior in emerging adulthood because we discovered that several sexual behaviors measured in this college sample were not associated with self-esteem at all. Future studies should explore more wellbeing aspects, such as psychological health, mood or affect, and interpersonal relationships, and their associations with sexual behavior. The prevalence of sexual behavior in emerging adulthood calls for a developmental perspective; we

need to understand both positive and negative aspects and associations that exist regarding sexual behavior in emerging adulthood.

References

- Abouserie, R. (1994). Sources and levels of stress in relation to locus of control and self-esteem in university students. *Educational Psychology: An International Journal of Experimental Educational Psychology, 14*, 323-330.
- Armstrong, E. A., & Hamilton, L. (2009). Gendered sexuality in young adulthood: Double binds and flawed options. *Gender & Society, 23*, 589–616.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens to the early twenties. *American Psychologist, 55*, 469-480.
- Arnett, J. J. (2004). *Adolescence and Emerging Adulthood: A Cultural Approach*. Upper Saddle River, NJ: Pearson Education.
- Beckman, L., Harvey, M., & Tiersky, L. (1996). Attitudes about condoms and condom use among college students. *Journal of American College Health, 44*, 243-250.
- Berman, M. (2006). Implicit and self-reported motives for romantic relationship cheating. *Proquest Information and Learning Center*. 1-214.
- Blake, S. M., Ledsky, R., Goodenow, C., Sawyer, R., Lohrmann, D., & Windsor, R. (2003) Condom availability programs in Massachusetts high schools: relationships with condom use and sexual behavior. *American Journal of Public Health, 93*, 955-962.
- Brody, S. (2003). Alexithymia is inversely associated with women's frequency of vaginal intercourse. *Archives of Sexual Behavior, 32*, 73-77.
- Brody, S., & Preut, R. (2003). Vaginal intercourse frequency and heart rate variability. *Journal of Sex & Marital Therapy, 29*, 371-380.

- Brody, S., Veit, R., & Rau, H. (2000). A preliminary report relating frequency of vaginal intercourse to heart rate variability, valsalva ratio, blood pressure, and cohabitation status. *Biological Psychology, 52*, 251-257.
- Caruthers, N.D. (1998). Stress and self-esteem. *National Undergraduate Research Clearinghouse, 1*. Available online at <http://www.webclearinghouse.net/volume/>. Retrieved December, 2012.
- Chandra, A., Mosher, W. D., & Copen, C. (2011). Sexual behavior, sexual attraction, and sexual identity in the United States: data from the 2006-2008 national survey of family growth. *National Health Statistics Reports, 36*, 1-36.
- Darling, C. A., Davidson, J. K., & Passarello, L. C. (1992). The mystique of first intercourse among college youth: the role of partners, contraceptive practices, and psychological reactions. *Journal of Youth and Adolescence, 21*, 97-117.
- Diamond, L. M., & Huebner, D. M. (2012). Is good sex good for you? Rethinking sexuality and health. *Social and Personality Psychology, 6*, 54-69.
- England, P., Shafer, E. F., & Fogarty, A. C. K. (2007). Hooking up and forming romantic relationships on today's college campuses. *The gendered society reader*. New York: Oxford University Press, 3, 531-547.
- Ethier, K. A., Kershaw, T. S., Lewis, J. B., Milan, S., Niccolai, L. M., & Ickovics, J. R. (2006). Self-Esteem, emotional distress and sexual behavior among adolescent females: Interrelationships and temporal effects. *Journal of Adolescent Health, 38*, 268-274.
- Feingold, A. & Mazzella, R. (1998). Gender differences in body image are increasing. *Psychological Science, 9*, 190-195.

- Fennell, M. (2007). *Research, practice, and prevention: low self-esteem*. Springer, US: Springer Science+Business Media, LLC. 297-314.
- Forbes, G. B., Doroszewicz K., Card, K., & Adams-Curtis, L. (2004). Association of the thin body ideal, ambivalent sexism, and self-esteem with body acceptance and the preferred body size of college women in Poland and the United States. *Sex Roles, 50*, 331-345.
- Fryar, C., Hirsch, R., Porter, K., Kottiri, B., Brody, D., Louis, T. (2007). Drug use and sexual behaviors reported by adults: United States, 1999-2002. *Advanced Data: From Vital and Health Statistics, 384*, 1-15.
- Furman, W., Brown, B., & Feiring, C. (1999). *The development of romantic relationships in adolescence*. Cambridge, UK: The Cambridge University Press.
- Garcia, J. R. & Reiber, C. (2008). Hook-up behavior: a biopsychosocial perspective. *Journal of Social, Evolutionary, and Cultural Psychology, 2*, 192-208.
- Gardner, L. H., & Amankwaa, L. I. (1998). A comparison of sexual behavior and self-esteem in young adult females with positive and negative tests for sexually transmitted diseases. *Association of Black Nursing Faculty in Higher Education, Inc., 9*, 89-94.
- Gillen, M. M., Lefkowitz, E. S., & Shearer, C. L. (2006). Does body image play a role in risky sexual behavior and attitudes? *Journal of Youth and Adolescence, 35*, 243-255.
- Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2005). Self-esteem and adolescent sexual behaviors, attitudes, and intentions: a systematic review. *Journal of Adolescent Health, 38*, 310-319.
- Greene, K. & Faulkner, S. (2005). Gender, belief in the sexual double standard, and sexual talk in heterosexual dating relationships. *Sex Roles, 53*, 239-251.

- Grello, C. M., Welsh, D. P. & Harper, M. S. (2006). No strings attached: the nature of casual sex in college students. *The Journal of Sex Research*, 43, 255-267.
- Heldman, C. & Wade, L. (2010). Hook-up culture: setting a new research agenda. *Sex Research and Social Policy*, 7, 323-333.
- Lefkowitz, E. S., & Gillen, M. M. (2006). "Sex is just a normal part of life": Sexuality in emerging adulthood. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 235-256). Washington, DC: American Psychological Association.
- Lehrer, J. A., Shrier, L. A., Gortmaker, S., & Buka, S., (2006). Depressive symptoms as a longitudinal predictor of sexual risk behaviors among US middle and high school students. *Pediatrics*, 118, 189-200.
- Lewandowski, K. & Scharge, T. (2010). A comparison of relationship satisfaction and sexual satisfaction in short-term and long-term relationships. *Journal of Undergraduate Research*, 13, 1-4.
- Kling, K. C., Hyde, J. S., Showers, C. J., & Buswell, B. N. (2009). Gender differences in self-esteem: A meta-analysis. *Review of General Psychology*, 13, 34-45.
- Macdonald, T. K., Martineau, A. M. (2002). Self-esteem, mood, and intentions to use condoms: When does low self-esteem lead to risky health behaviors? *Journal of Experimental Social Psychology*, 38, 299-306.
- Marston, C. & Kling, E. (2006). Factors that shape young people's sexual behavior: a systematic review. *Department of Public Health and Policy*, 368, 1581-1586.
- Menard, D. A., & Offman, A. (2009). The interrelationships between sexual self-esteem, sexual assertiveness, and sexual satisfaction. *The Canadian Journal of Human Sexuality*, 18,

35-57.

- O'Sullivan, L. F. & Hearn, K. D. (2008). Predicting first intercourse among urban early adolescent girls: The role of emotions. *Cognition & Emotion*, 22, 168-179.
- O'Sullivan, L. F., Hoffman, S., Harrison, A., & Dolezal, C. (2006). Men, multiple sexual partners, and young adults' sexual relationships: understanding the role of gender in the study of risk. *Journal of Urban Health*, 83, 695-708.
- Owen, J. & Fincham, F. (2011). Young adults' emotional reactions after hooking up encounters. *Archives of Sexual Behavior*, 40, 321-330.
- Raj, A., & Pollack, R.H. (1995). Factors predicting high-risk sexual behavior in heterosexual college females. *Journal of Sex & Marital Therapy*, 21, 213-224.
- Rehbein-Narvaez, R., Garcia-Vasquez, & Madson, L.. (2006). The relationship between self-esteem and sexual functioning in collegiate women. *The Journal of Social Psychology*, 146, 250-252.
- Richters, J., Grulich, A. E., De Vissor, R. O., Smith, A., & Rissel, C. E. (2003). Sexual and emotional satisfaction in regular relationships and preferred frequency of sex among a representative sample of adults. *Australian and New Zealand Journal of Public Health*, 27, 171-179.
- Rogers, C. R. (1961). The developing values of the growing person. *The Psychiatric Institute Bulletin*, 1, 1-17.
- Rostosky, S., Wilcox, B., Wright, M., Randall, B.(2004). The impact of religiosity on adolescent sexual behavior: a review of the evidence. *Journal of Adolescent Research*, 19, 677-697.

- Santelli, J.S., Davis, M., Celentano, D.D., Crump, A.D., & Burwell, L.G. (1995). Combined use of condoms with other contraceptive methods among inner-city Baltimore women. *Family Planning Perspectives, 27*, 74-78.
- Satcher, D. (2001). *Youth violence: A report of the surgeon general*. Washington, DC: Author. Available Internet: www.surgeongeneral.gov/cmh.childreport.htm.
- Sheppard, V. J., Nelso, E. S., & Andreoli-Mathie, V. (1995). Dating relationships and infidelity: Attitudes and behaviors. *Journal of Sex & Marital Therapy, 21*, 202-212.
- Shrier, L., Shih, M., Hacker, L., & Moor, C. (2007). A momentary sampling study of the affective experience following coital events in adolescents. *Journal of Adolescent Health, 40*, 357-357.
- Taylor, S. & Brown, J. D. (1988). Illusion and wellbeing: a social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Tolman, D. L., & McClelland, S. I. (2011). Normative sexuality development in adolescence: A decade in review, 2000-2009. *Journal of Research on Adolescence, 21*, 242-255.
- Bureau of Labor Statistics. (2011, April 19). College enrollment and work activity of 2011 high school graduates. Retrieved from <http://www.bls.gov/news.release/hsgec.nr0.htm>.
- U.S. Census Bureau. (2010). Median age at first marriage by sex: 1890 to 2010. Retrieved from <http://www.census.gov/hhes/socdemo/marriage/data/acs/ElliottetalPAA2012figs.pdf>.
- Vasilenko, S. A., Lefkowitz, E. S., & Maggs, J. L. (2011). Short-term positive and negative consequences of sex based on daily reports among college students. *Journal of Sex Research, 49*, 558-569.
- Vasilenko, S. A., Lefkowitz, E. S., & Ram, N. (2011). Body image and first sexual intercourse in late adolescence. *Journal of Adolescence, 34*, 327-335.

- Wade, L. & Heldman, C. Hooking up and opting out: what students learn about sex in their first year of college. *Sex for Life: From Virginity to Viagra, How Sexuality Changes Throughout our Lives*. New York: New York University Press, 2012.
- Walsh, A. (1991). Self-esteem and sexual behavior: exploring gender differences. *Sex Roles*, 25, 441-450.
- Wendt, S.J., & Solomon, L.J. (1995). Barriers to condom use among heterosexual male and female college students. *Journal of American College Health*, 44, 105-110.
- Wulfert, E. & Wan, C. (1993). Condom use: a self-efficacy model. *Health Psychology*, 12, 346-353.

Table 1

Linear Regression of Association Between Penetrative Sex in the Past 12 Weeks (Ever) and Self-Esteem, With Gender as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.01*		
Penetrative Sex			.08*
Step 2	.01*	.01*	
Gender			-.04
Interaction: Gender x Penetrative sex			.13*

$N=744$; * $p<.05$.

Table 2

Linear Regression of Association Between Frequency of Penetrative Sex in the Past 12 Weeks and Self-Esteem, With Gender as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.01		
Frequency of Sex			.08
Step 2	.02	.02	
Gender			.14
Interaction: Gender x Frequency			.00

$N=357$; $*p<.05$.

Table 3

Linear Regression of Association Between Penetrative Sex in the Past 12 Weeks (Ever) and Self-Esteem, With Relationship Status as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.01		
Penetrative Sex			.08
Step 2	.01	.00	
Relationship Status			.02
Interaction: Relationship Status x Penetrative Sex			.03

$N=744$; $*p<.05$.

Table 4

Linear Regression of Association Between Frequency of Penetrative Sex in the Past 12 Weeks and Self-Esteem, With Relationship Status as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.01		
Frequency of Sex			.08
Step 2	.02	.01	
Relationship Status			-.06
Interaction: Relationship Status x Frequency			.29*

$N=357$; * $p<.05$.

Table 5

Linear Regression of Association Between Number of Sexual Partners in the Past 12 Weeks and Self-Esteem, With Gender as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.00		
Number of Partners			-.05
Step 2	.02	.02	
Gender			.11
Interaction: Gender x Number of Partners			.03

$N=360$; * $p<.05$.

Table 6

Linear Regression of Association Between Number of Sexual Partners in the Past 12 Weeks and Self-Esteem, With Relationship Status as a Moderator

	R^2	$R^2\Delta$	β
Step 1	.00		
Number of Partners			-.05
Step 2	.00	.00	
Relationship Status			.01
Interaction: Relationship Status x Number of Partners			.01

$N=360$; $*p<.05$.

Table 7

*Linear Regression of Association Between Condom Use in the Past 12 Weeks and Self-Esteem,
With Gender as a Moderator*

	R^2	$R^2\Delta$	β
Step 1	.00		
Condom Use			.03
Step 2	.03	.03	
Gender			.23
Interaction: Gender x Condom Use			-.09

$N=276$; * $p<.05$.

Table 8

*Linear Regression of Association Between Condom Use in the Past 12 Weeks and Self-Esteem,
With Relationships Status as a Moderator*

	R^2	$R^2\Delta$	β
Step 1	.00		
Condom Use			.03
Step 2	.01	.01	
Relationship Status			.13
Interaction: Relationship Status x Condom Use			-.09

$N=276$; * $p<.05$.

ACADEMIC VITA of Kelsie Walsh

Kelsie Walsh
440 W. College Ave.
State College, PA 16801
krw5113@psu.edu

Education: Bachelor of Science in Human Development and Family Studies, Lifespan
Developmental Science Option, Penn State University, Spring 2013
Minor in Psychology
Honors in Human Development and Family Studies
Thesis Title: Associations Between Sexual Behavior and Self-Esteem Among
College Attending Emerging Adults
Thesis Supervisor: Eva S. Lefkowitz

Related Experience:

Research Assistant for the University Life Study (longitudinal study of college
students' sexual behavior and alcohol use)
Principal Investigator: Jennifer Maggs
Fall 2011, Fall 2012

Teaching Assistant, HD FS 311 (Introduction to Human Development & Family
Studies Interventions)
Instructor: Jennifer L. Crissman Ishler
Spring 2013

Teaching Assistant, HD FS 411 (The Helping Relationship)
Instructor: Marc McCann
Fall 2012

Teaching Assistant, HD FS 414 (Resolving Individual and Family Problems)
Instructor: Jennifer L. Crissman Ishler
Spring 2013

Independent Study, HD FS website design and planning
Supervisor: Dr. Kathryn Hynes
Spring 2013

Awards: Suzann Andrews Tedesco Award
The Frederick and Jeanne Riebel Lord Academic Excellence Scholarship
Dean's List: Fall 2009- Spring 2013

Activities: Volunteer, *Cross-Cultural Solutions*; Ghana, Africa
Member, *Alpha Chi Omega Sorority*
Dancer and Moraler, *IFC/Panhellenic Dancer Marathon (THON)*
LGBTQ Ally, *advocate/ally, LGBT community* at Pennsylvania State University
Member, *Blue and White Society*