PROTECTIVE SEXUAL BEHAVIORS: THE ROLE OF PARENT-TEEN SEXUAL MESSAGES

by

AMANDA HOOD

B.A., Wichita State University, 2013

A thesis submitted to the Graduate Faculty of the University of Colorado Colorado Springs in partial fulfillment of the requirements for the degree of Master of Arts Department of Psychology

2019
This thesis for the Master of Arts degree by
Amanda Hood
has been approved for the
Department of Psychology
by
Elizabeth Daniels, Chair
Kristin Samuelson
Andrew Lac

Date: 12/13/19
ABSTRACT

Engagement in protective sexual behaviors, including condom use, STI/STD testing, and communication with a sexual partner, are important for preventing an unplanned pregnancy and acquiring a sexually transmitted infection or disease. Prior research suggests that parent-teen communication about sex is associated with engagement in protective sexual behaviors. In addition, research suggests that body image is related to protective sexual behaviors. Therefore, the proposed study examined relations between frequency of parent-teen communication about sex, accepting versus restrictive messages about sex, and protective sexual behaviors in a sample of 350 women (M age = 21.17, SD = 2.34). In addition, body perceptions (i.e., positive body image, self-objectification) were examined as mediators of these relations. Results demonstrated that accepting and restricting parental messages about sex are related to STI/STD testing and health protective sexual communication with a partner among heterosexual, emerging adult women. Prior research, theory, and preliminary and SEM analyses of this study indicate that parental messages about sex are important factors in heterosexual, emerging adult women’s protective sexual behaviors.
ACKNOWLEDGEMENTS

Going through the thesis writing process was one of the most difficult things I have ever had to do, so I want to thank everyone that has helped me along the way. First, thank you Dr. Beth Daniels. You helped me learn to develop solid research ideas and then helped me convey those ideas through comprehensible writing. Thank you to my thesis committee members, Dr. Kristi Samuelson, and Dr. Andrew Lac. Kristi, it was your trauma class where I first began to develop the idea for my thesis. You had suggested a better statistical analysis that I did not yet know. Andrew, it was in your class where I learned more about this statistical analysis and I was able to apply it to my thesis. And thanks, you two, for your guidance along the way. To mom, dad, and my brother, Nick, thank you for all your support, love, and belief in me. I love you. To my friend, Vanessa, thanks for all those study sessions. Without you I would have gone crazy. Thanks, girl. Finally, thank you to my cat, Caesar, for being there when no one else could be. Thank you all!
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CHAPTER I

INTRODUCTION

Engagement in protective sexual behaviors, including condom use, STI/STD testing, and communication with a sexual partner, are important for preventing an unplanned pregnancy and acquiring a sexually transmitted infection or disease. Prior research suggests that parent-teen communication about sex is associated with engagement in protective sexual behaviors. In addition, research suggests that body image is related to protective sexual behaviors. Therefore, the proposed study examined relations between frequency of parent-teen communication about sex, accepting versus restrictive messages about sex, and protective sexual behaviors in a sample of 350 women ($M_{age} = 21.17, SD = 2.34$). In addition, body perceptions (i.e., positive body image, self-objectification) were examined as mediators of these relations. Results demonstrated that accepting and restricting parental messages about sex are related to STI/STD testing and health protective sexual communication with a partner among heterosexual, emerging adult women. Prior research, theory, and preliminary and SEM analyses of this study indicate that parental messages about sex are important factors in heterosexual, emerging adult women’s protective sexual behaviors. Positive body image and self-objectification were examined as potential mediators of these relations.
Theoretical Framework

Objectification theory posits that girls and women are exposed to sociocultural gendered experiences that reduce their importance from that of their intellect and physical capabilities to that of their body parts and sexual functions (Fredrickson & Roberts, 1997). For example, women in the U.S. are often viewed with a sexual gaze that separates their bodies from who they are as people, effectively dehumanizing them. One study found that about a third (31%) of U.S. women experience catcalls, whistles, or stares every few days (Fairchild & Rudman, 2008). Another study found that 75% of 81 female participants aged 18 to 46 experienced objectifying events 3.69 times per week with a range of zero to 26 times per week (Holland, Koval, Stratemeyer, Thomson, Haslam, 2016).

Socialization is defined as how an individual learns the beliefs, ideas, values, and norms of a culture and then how (s)he adopts these constructs into his/her personality to function in that specific culture (Schneewind, 2015). Sexual socialization is how one develops his/her sexual attitudes (Spanier, 1977). Objectification theory posits that these socialization practices are gendered and that these gendered experiences may lead girls to self-objectify (Fredrickson & Roberts, 1997). An example of these gendered practices are how women are subjected to the Madonna-Whore dichotomy (i.e., women can only be pure and virginal, or they are promiscuous and easy) through cultural socializers (Crawford & Popp, 2003). In particular, media emphasizes the importance of sex and sexiness over women’s intellect and ability, by promoting things such as, wearing revealing clothing, wearing pushup bras for school aged girls, and behaving in a sexy manner (e.g., coyness; Levin & Kilbourne, 2008; Valenti, 2009).
Parents are important socializers. They instruct their children about appropriateness centered around modesty, nudity, and privacy regarding displays of affection and physical interaction with others (Shtarkshall, Santelli, & Hirsch, 2007). As girls get older, messages begin to become more specifically about sex (i.e., what is and what is not allowed regarding dating and general sexuality) (Kim & Ward, 2007; Taris, 2000; Valenti, 2009). Indeed, parents often promote messages of “purity” to adolescent girls, through things such as purity balls, which are planned parties in almost every state of America where a girl will pledge to remain abstinent until marriage (Valenti, 2009). These messages of purity reduce girls’ importance to their virginity (Valenti, 2009). This practice constitutes objectification, as the importance is on the teens’ body parts and sexual functions, not their abilities, intellect, and feelings. Calogero, Tantleff-Dunn, and Thompson (2011) argue that if abstinence and sexiness are the only options, young girls and women may find sexiness the more appealing of the two and begin to self-objectify.

Therefore, parent-teen messages about sex is important so that teen girls who are bombarded with sexy media get the correct information about sex. However, parents may not always provide information about sex, which may have negative consequences for young women’s sexual health.

**Parent-Teen Communication**

Parent-teen communication is an important factor in teens’ and emerging adults’ sexual attitudes and behaviors. Indeed, research has found relations between parent-teen communication about sex and teen and emerging adult sexual attitudes and behaviors (Coakley, Randolph, Shears, Beamon, Collins, & Sides, 2017; DiLorio, Pluhar, & Belcher, 2003; Hirschman, Impett, & Schooler, 2006; Ritchwood, Penn, Peasant,
Parental frequency of communication about sex is the amount of times caregivers engage in any type of communication to their adolescent about sex including masturbation, sex in dating relationships, reproduction, etc. Parental accepting messages is the act of caregivers talking about sex with their adolescents in a positive and understanding manner. Parental restrictive messages about sex is the act of caregivers talking about sex with their adolescents in a negative and deterring manner. In the following sub-sections, I will discuss specific aspects of parent-teen communication about sex including frequency of communication and accepting versus restrictive values.

**Frequency.** It is difficult to determine the frequency of parent-teen sexual communication in U.S. families. One recent study found that 71% of adolescents reported having discussed sex with their parents (Widman, Choukas-Bradley, Helms, Golin, & Prinstein, 2014). However, there are wide discrepancies in parent reports as compared to teen reports about the frequency of sexual communication. In a review of the literature, DiLorio and colleagues (2003) found that sexual intercourse was discussed 19-85% of the time depending on the study and the source (i.e., parent vs. teen). Reporting on other topics (e.g., birth control, STIs) revealed similar discrepancies. The authors speculated that these discrepancies could be due to parents and adolescents having different perspectives about what was communicated. For example, a study conducted by Hadley and colleagues (2009) found that almost half of parents (45%) reported discussing a variety of sexual topics (e.g., birth control, HIV, when to start having sex) with their teen, whereas only a third of teens (31%) reported discussing the same topics.
These discrepancies are concerning because research has demonstrated that amount of communication is associated with engagement in risky sexual behaviors. Research has indicated that the absence of parent-teen communication about sex is associated with an increased likelihood of teens engaging in drug use before intercourse, lower self-efficacy for condom use, and lower likelihood of discussing HIV protection with a partner (Crosby, Hanson, & Rager, 2009). In addition, less parent-teen communication about sex is associated with less frequent use of hormonal contraceptives and condoms and less frequent discussion of safe sex with sexual partners among adolescents (DiClemente, Wingood, Crosby, Cobb, Harrington, & Davies, 2001). These findings demonstrate that when sexual communication between parents and teens is absent or minimal, teens may engage in riskier sexual behaviors. In the present study, it is expected that a higher frequency of parent-teen communication about sex will be related to higher engagement in protective sexual behaviors, whereas a lower frequency of communication will be related to lower engagement in protective sexual behaviors.

**Accepting versus restricting.** Prior research has discussed permissive and restrictive communication. Permissive sexual values are defined as the acceptance of engagement in various sexual activities such as masturbation, kissing, petting, premarital sex, and non-relational sex (Hendrick, Hendrick, & Reich, 2006; Kim & Ward, 2007; Negy, Velez-moro, Reig-Ferrer, Smith-Castro, & Livia, 2015; Taris, 2000; Tobey, Hillman, Anagurthi, & Somers, 2011). In contrast, restricting sexual values are defined as a prohibition against engagement in various sexual activities such as dating during adolescence, masturbation, non-intercourse sexual activities, same-sex sexual activities, premarital sex, and cohabitation (Kim, 2009; Kim & Ward, 2007; Negy et al., 2015).
However, the word ‘permissive’ has connotations of encouragement in teen sexual behavior, therefore the word ‘accepting’ will be used in the proposed study. Accepting messages are defined as the acknowledgement of adolescents’ engagement in various sexual activities (e.g., masturbation, kissing, petting, premarital sex, and non-relational sex) as normal.

Restricting messages teach that sex is unacceptable; because of this it may be that emerging adults who received restrictive messages about sex may be less prepared for sex (e.g., have a condom) when they do engage in sexual behavior. Therefore, in the present study, it is expected that accepting messages (i.e., messages about sex that focuses on teen sexuality as normative rather than immoral) will be related to more engagement in protective sexual behaviors, whereas restricting messages will be related to less engagement in protective sexual behaviors.

Very little research has examined associations between parental accepting or restricting sexual socialization and emerging adults’ sexual attitudes and behaviors. In addition, existing findings are mixed. For example, a cross-cultural study found that parental sexual values communication was not significantly related to emerging adults’ sexual values (e.g., belief that teen sexuality is normative) in the United States, suggesting no relation between parental and emerging adult sexual values (Negy et al., 2015). In contrast, another study of U.S. emerging adults found that those whose parents had more accepting sexual values tended to also have accepting sexual values, suggesting a positive relation between parent and teen accepting sexual values (Gravel, Young, Darzi, Olavarria-Turner, & Lee, 2016). In addition, Hutchinson and Montgomery (2007) found that African American college students whose parents communicated with them
about sexual risk (e.g., HIV/AIDS, condoms, birth control) had higher conservative sexual attitudes towards engaging in sexual activity, suggesting a positive relation between parental communication on risk and teen conservative sexual values. Because of conflicting findings on the relation between parental sexual values and child sexual values, more research is necessary.

In summary, more frequent parent-teen sexual communication is associated with more protective sexual behaviors (DiClemente et al., 2001; Hutchinson & Montgomery, 2007; Malcolm et al., 2013), whereas absent or minimal parent-teen sexual communication is associated with risky sexual behaviors (Crosby, Hanson, and Rager, 2009; DiClemente et al., 2001). In addition, it may be that accepting messages are related to more protective sexual behaviors, whereas restricting messages are related to less protective sexual behaviors.

**Body Attitudes**

Body attitudes such as self-objectification and body appreciation may have a mediating role between parental messages about sex and emerging adult women’s protective sexual behaviors.

**Self-objectification.** Objectifying parental attitudes about their daughters’ sexuality may be related to how daughters feel about their bodies, leading daughters to self-objectify. Parents may focus on their daughters’ maintaining their “purity” by emphasizing abstinence until marriage (Valenti, 2009). In fact, one interview study found that parents viewed their adolescent and/or emerging adult daughters as potential victims and vulnerable regarding sex (Elliott, 2010). One father stated that he has a rule that his daughters may only date once they turn 18. In addition, there was mention of
how boys will just use women for sex then discard the women when they are done. Another qualitative study found that college women reported receiving messages from their mothers during adolescence to wait until marriage or until they were older to have sex (Goldfarb, Lieberman, Kwiatkowski, & Santos, 2018). However, these messages also came with themes of loss of “purity” and “innocence” from having sex. These narratives suggest that girls and women 1) do not have their own sexual desires and 2) need to save their virginity until they are married because if they do not, the boy/man will discard them after sex. These narratives have been around for hundreds of years and have been used to subject women to virginity checks before marriage in some cultures (Brochmann & Dahl, 2017). Placing emphasis on girls and women maintaining their virginity until marriage is objectification, as the focus is on virginity as the culmination of their worth. Objectifying experiences can lead women to self-objectify (i.e., they treat themselves as sexual objects), to engage in self-monitoring behavior, and to view themselves from a third person perspective (Fredrickson & Roberts, 1997). One study found that about half (43%) of adult women experience trait (chronic) self-objectification (Strelan & Hargreaves, 2005).

Self-objectification has been shown to be related to many negative outcomes in women. For example, studies have demonstrated that women who self-objectify were more likely to show decreased cognitive performance (Gervais, Vescio, & Allen, 2011; Kozak, Roberts, & Patterson, 2014; Pacilli, Tomasetto, & Cadinu, 2016; Quinn, Kallen, Twenge, & Fredrickson, 2006), increased eating disorder symptomatology (Calogero, Davis, & Thompson, 2005; Moradi, Dirks, & Matteson, 2005; Muehlenkamp & Saris-Baglama, 2002), body shame (Moradi et al., 2005; Steer & Tiggemann, 2008), and sexual
dysfunction (Steer & Tiggemann, 2008). Furthermore, researchers have proposed investigating the relation between self-objectification and risky sexual behavior (Moradi & Huang, 2008), as well as studying positive body image (the inverse of a negative approach) and protective sexual behaviors (Avalos, Tylka, & Wood-Barcalow, 2005; Ramseyer Winter, 2017; Ramseyer Winter & Satinsky, 2014).

In summary, parent-teen messages about sex may be related to self-objectification, and self-objectification may relate to less engagement in protective sexual behaviors. Therefore, I hypothesize that self-objectification will mediate relations between parent-teen messages and protective sexual behaviors.

**Positive body image.** Parents who communicate with their daughters about sex in an accepting manner may elicit more conversations about protective sexual behaviors, as the focus may be less on maintaining “purity” and more on respecting and appreciating one’s body and what it is capable of, or positive body image. Positive body image is theorized to be a multifaceted construct consisting of body appreciation, body acceptance and love, broadly conceptualizing beauty, adaptive appearance investment, inner positivity, and filtering information in a body-protective manner (Tylka & Wood-Barcalow, 2015). Furthermore, positive body image is not the opposite of negative body image, which is typically defined as thin-ideal internalization, body shame, and body dissatisfaction (Cash & Smolak, 2011); these are two separate constructs (Tylka & Wood-Barcalow, 2015). Indeed, reducing negative body image will not necessarily increase positive body image, indicating that positive body image and negative body image are not on the same spectrum (Cash & Smolak, 2011). Collectively, these components of positive body image serve to care for and protect one’s physical and
psychological health (Tylka & Wood-Barcalow, 2015). For example, research has linked positive body image with a number of positive outcomes including intuitive eating (Augustus-Horvath & Tylka, 2011), engagement in regular exercise (Homan & Tylka, 2014), self-compassion (Homan & Tylka, 2015), and positive sexual functioning (Ackard, Kearney-Cooke, & Peterson, 2000).

Most relevant to the present study is the construct of body appreciation. Body appreciation is the praise of and focus on the body’s abilities and unique features regardless of the body’s appearance (Avalos et al., 2005). Body appreciation is associated with a number of positive outcomes including higher body esteem, lower body surveillance, lower body shame, higher self-esteem, higher optimism, proactive coping, higher positive evaluation of appearance, lower body preoccupation, and lower body dissatisfaction (Avalos et al., 2005). In addition, body appreciation is associated with more engagement in non-barrier contraceptive use among women aged 18 to 56 (Ramseyer Winter, Ruhr, Pevehouse, & Pilgrim, 2018). Body appreciation is also associated with increased sexual communication among emerging adult women with a partner (Ramseyer Winter et al., 2018) and greater likelihood of male partners of women ages 18 to 61 years using a condom during last intercourse (Ramseyer Winter & Satinsky, 2014).

In summary, parent-teen accepting messages may be related to body appreciation and body appreciation may be related to more engagement in protective sexual behaviors. In addition, a range of positive outcomes are associated with body appreciation. Researchers have suggested that more work should examine how self-objectification and positive body image are related to sexual health to shed light on ways to prevent negative
sexual health outcomes (Ramseyer Winter, 2017; Ramseyer Winter & Satinsky, 2014). Therefore, I hypothesize that body appreciation will mediate relations between parent-teen messages and protective sexual behaviors. That is, greater frequency of communication will predict high body appreciation, which will predict greater engagement in protective sexual health behaviors. In addition, high levels of accepting messages will predict high body appreciation which will predict greater engagement in protective sexual behaviors. Last, high levels of restricting messages will predict low body appreciation, which will predict less engagement in protective sexual behaviors.

**Protective Sexual Behaviors**

Protective sexual behaviors are behaviors one engages in to prevent the spread and contraction of STIs and STDs. These behaviors include condom use, STI testing, and health protective sexual communication with a sexual partner (Ramseyer Winter & Satinsky, 2014). In contrast, risky sexual behaviors include less frequent use of condoms, less frequent use of birth control, a high number of sexual partners, and intercourse while under the influence of drugs or alcohol (Flory, Molina, Gnagy, & Smith, 2006; McCree, Wingood, DiClemente, Davies, & Harrington, 2003). As mentioned earlier, some women do not engage in protective sexual behaviors, such as condom use, STI testing, and health protective sexual communication (Cleary et al., 2002; Coppen, 2017; Cuffe et al., 2016). A possible reason for this may be that self-objectification causes women to believe their importance is in their appearance, and therefore they might be less likely to engage in behaviors such as requesting condom use during sex (Impett, Schooler, & Tolman, 2006). The reasons behind these patterns have not been fully explored. However, one study has demonstrated an association between
High self-objectification and less frequent condom use (Impett et al., 2006). Research has not yet examined an association between self-objectification and STI testing. In addition, research has not yet examined associations among self-objectification and health protective sexual communication with partners about sex.

In contrast, Schooler (2013) found an association between high positive body image and more frequent condom use among female adolescents. In addition, a couple of studies have found an association between high body appreciation and condom use among emerging adult and college women (Ramseyer Winter, 2017; Ramseyer Winter & Ruhr, 2017). Little research has examined an association between positive body image and STI testing. However, one study found that positive body image among women aged 18 to 64 was unrelated to having STI testing done within the last year (Ramseyer Winter & Satinsky, 2014). Research has shown a positive relation between positive body image and communication with sexual partners (Gillen & Markey, 2014; Ramseyer Winter et al., 2018). Taken together, research suggests there is a relation between high positive body image and more frequent condom use and communication with sexual partners; however, there may not be an association between positive body image and STI testing.

In summary, research suggests that women with higher positive body image have a higher likelihood of using condoms and communicating with sexual partners about sex compared to those with lower positive body image. Based on the one study cited there may not be a relation between positive body image and STI testing; however, more research should explore possible relations between these variables. In contrast, those who experience self-objectification may be less likely to engage in protective sexual behaviors. This present study will examine possible relations between body appreciation,
self-objectification, and protective sexual behaviors. It is expected that high self-objectification will be associated with less frequent condom use, less engagement in STI testing, and less health protective sexual communication. In contrast, high body appreciation is expected to be associated with engagement in more frequent condom use, STI/STD testing, and health protective sexual communication.

**Present Study**

The present study will examine if parent-teen messages predict protective sexual behaviors. Positive body image and self-objectification will be examined as mediators of these relations. **The following hypotheses were tested.**

- **H1:** Parent-teen high frequency of sexual messages will predict more frequent condom use (H1a), more frequent STI/STD testing (H1b), and more engagement in health protective sexual communication (H1c).
- **H2:** Parent-teen accepting sexual messages will predict more frequent condom use (H2a), more frequent STI/STD testing (H2b), and engagement in more health protective sexual communication with a partner (H2c).
- **H3:** Parent-teen restrictive sexual messages will predict less frequent condom use (H3a), less frequent STI/STD testing (H3b), and lower engagement in health protective sexual communication (H3c).
- **H4:** Body appreciation will mediate relations between predictor variables and outcome variables; specifically body appreciation will be positively associated with frequency of messages (H4a) and accepting messages (H4b), and negatively associated with parent-teen restrictive sexual messages (H4c) and positively
associated with condom use (H4d), STI/STD testing (H4e), and engagement in health protective sexual communication (H4f).

- H5: Self-objectification will mediate relations between predictor variables and outcome variables; specifically self-objectification will be negatively associated with frequency of messages (H5a) and accepting messages (H5b), and positively associated with parent-teen restrictive sexual messages (H5c) and negatively associated with condom use (H5d), STI/STD testing (H5e), and engagement in health protective sexual communication (H5f).
CHAPTER II

METHOD

Participants

An initial convenience sample of 532 emerging adult (aged 18 – 25), heterosexual women, who have been sexually active within the last six months was collected online from a medium-sized university in the western region of the United States using an online participant pool system ($n = 284$) and online using Amazon’s Mechanical Turk (MTurk; $n = 248$). Participants were female students in undergraduate psychology classes and U.S. women with MTurk worker accounts. To participate in the study participants must have been between 18 to 25 years of age, a woman, heterosexual, sexually active over the last six months. Participants who participated through the online participant pool system received course credit as compensation for their participation in this research study. Participants who participated through MTurk received $0.50 as compensation for their participation.

Participants were removed from the study for the following reasons: did not indicate age ($n = 1$); responded to the question about vaginal condom use as “N/A” ($n = 6$); took less than five minutes to complete the survey ($n = 35$); took longer than an hour to complete the survey ($n = 11$); did not finish the study ($n = 19$); indicated age as over 25 ($n = 5$); indicated gender as male ($n = 3$); indicated lack of sexual activity over the prior six months ($n = 10$); and reported a sexual minority sexual orientation ($n = 11$). In addition, there were two attention checks within the study. The first attention check
requested that participants respond with “agree”, and the second requested that participants respond with “almost always”. Participants who failed to meet these attention checks were removed from analysis \((n = 25)\). In addition, a setting to restrict the sample to the U.S. in MTurk was inadvertently not selected, resulting in a global sample. Therefore, participants were also removed if their latitude and longitude indicated they resided outside of the US; that is latitude did not fall between 19.50139 and 64.85694 and longitude did not fall between -161.75583 and -68.01197 (Latitudelongitude.org, 2015; \(n = 17\)) or if the latitude and longitude were not indicated at all \((n = 39)\).

The final sample consisted of 350 (online participant pool system \(n = 217\), MTurk \(n = 133\)) heterosexual emerging adult women \((M = 21.17, SD = 2.34)\) who had been sexually active in the past six months. Participants were mainly White/Caucasian (72.3%; mixed 10.9%, Hispanic/Latina 8.0%, Black/African American 4.0%, Asian-American/Asian/Pacific Islander 4.0%, American-Indian/Alaskan Native 0.9%) other 0%). In addition, participants indicated their relationship status at the time of the study as coupled (77.7%), single (19.4%), or other (2.9%), with relationship length ranging from 0 to 10.50 years \((M = 2.1\) years, \(SD = 2.18\) years).

**Procedure**

Participants completed the study online through the survey-hosting site, Qualtrics. After completing the informed consent process, participants answered demographic questions. Then, participants were instructed to respond to survey questions involving their communication with their parents as a teen about sex, their feelings towards their bodies, and their protective sexual behaviors. Finally, participants completed a measure
of social desirability. The study took between 5.50 and 52.10 minutes to complete ($M = 17.38$, $SD = 8.41$).

**Measures (see Appendix)**

**Frequency of parent-teen sexual communication.** Parent-teen frequency of sexual communication was assessed using a modified version of the five-item Parental Communication of Sexual Values scale (PCSV; Somers & Canivez, 2003). This modification entailed changing the response options from the original scale (i.e., 1 (Never), 3 (A few times), 5 (A lot of times); response options for 2 and 4 were not provided) to add the labels: 2 (Once), 4 (Quite a bit). In addition, two items were removed after data collection. The item that assessed the frequency of communication about same-sex sexual activity was removed due to its irrelevance to the current sample of heterosexual women. The item that assessed the frequency of communication about living together without being married was removed because it does not directly measure sexual behavior. Items were rated on a scale of 1 (Never) to 5 (A lot of times). A sample item is, “My caregiver(s) communicated with me when I was an adolescent about non-intercourse types of sexual activity…”. A composite score was calculated by taking the average of the three items in this scale. Higher scores indicated more frequent communication. A reliability analysis was conducted on the three items and the internal consistency was acceptable ($\alpha = .75$).

**Accepting versus restricting parent-teen messages about sex.** To assess whether parent-teen sexual messages were accepting or restricting, participants completed the Sexual Socialization Discourses Measure (Day Fletcher, Ward, Thomas, Foust, Levin, & Trihn, 2015). This 50-item Likert-type measure assesses perceived
information received about sexuality from parents, peers, and media. For the purposes of this study, only the parental messages variables were of interest. Items were rated on a scale of 1 (None) to 4 (A lot). A sample item is, “Sex outside of marriage is a sin.” Researchers have used variations of this measure with fewer items than the original 50-item measure (Day Fletcher et al., 2015; Manago, Ward, & Aldana, 2015; Trinh, Ward, Day, Thomas, & Levin, 2014). Therefore, the entire 50-item measure was used, and an exploratory factor analysis was conducted to identify the subscales measuring accepting and restricting types of parent-teen messages.

First, statistical assumptions were assessed. One item was slightly skewed (2.28) and leptokurtic (4.77); therefore, a log transformation was performed. After the transformation, skewness was within acceptable limits, ranging from -1.54 to 1.74. The kurtosis was within acceptable limits, ranging from -1.61 to 1.71. There were no missing data. Communalities, which indicate how much all other extracted factors explain an item’s variance, ranged from .29 to .90. Items with communalities less than the recommended cut-off of .50 were removed from the measure resulting in communalities ranging from .51 to .90. Factorability of the items was assessed using Bartlett’s Test of Sphericity and Kaiser-Meyer-Olkin index of sampling adequacy (KMO). Bartlett’s Test of Sphericity was found to be significantly different from the correlation identity matrix, $\chi^2(528) = 7904.04, p < .001$. The KMO measure of sampling adequacy was excellent at .93.

Next, an exploratory factor analysis applying maximum likelihood with oblique (promax) rotation was conducted based on methods in the existing literature (Manago et al., 2015; Trinh et al., 2014). The resulting factors were accepting messages (factor 1;
e.g., Being sexual is a natural part of being human), gendered messages (factor 2; e.g., Men want as much as they can get on a first date), restricting messages (factor 3; e.g., Sex belongs only in married relationships), relational messages (factor 4; e.g., Sex is best when the partners are in a loving and committed relationship), and same-sex attraction messages (factor 5; i.e., Homosexuality is a question of sexual orientation, not morality) (see Table 1). Scree plot and Eigenvalues both support the existence of five factors. Eigenvalues indicated that factor 1 explained 22.54% of the variance; factor 2, 24.45%; factor 3, 6.82%; factor 4, 3.67%; and factor 5, 3.23%. All five factors total to explain 60.71% of the variance. Finally, all correlations of factors were in the small to moderate range, indicating that oblique rotation was appropriate (see Table 2).

A reliability analysis was conducted for both accepting and restricting messages factors. Internal consistency was excellent for both accepting ($\alpha = .91$) and restricting messages ($\alpha = .92$). Composite scores were then created for both accepting messages and restricting messages factors, with one item (Homosexuality is perverse and unnatural) removed due to the current sample comprising only heterosexual women. Higher scores indicated more accepting or restricting messages.

**Body appreciation.** Body appreciation was measured using the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015). This is a 10-item Likert-type measure. Items are rated on a scale of 1 (Never) to 5 (Always). Example statements rated by the participant are: “I feel love for my body” and “My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile”. Items were averaged into a composite score, and scores ranged from 1 to 5. Higher scores indicated higher body appreciation. This scale has excellent reliability ($\alpha = .95$).
Table 1

*Standardized Factor Loadings for Parent-Teen Messages About Sex*

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<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
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<th>Factor 3</th>
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<td>Accepting Messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Being sexual is a natural part of being human.</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Women have just as many sexual urges and desires as men.</td>
<td>0.87</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>13. Having sex should be viewed as just a normal part of dating relationships.</td>
<td>0.83</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14. The human body is nothing to be ashamed of.</td>
<td>0.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Having a “one-night stand” is okay as long as both partners agree that’s all it is.</td>
<td>0.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Sex outside of marriage is perfectly fine as long as “protection” is used to prevent STDs and unplanned pregnancies.</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Only you can know when you are ready for sex.</td>
<td>0.51</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>18. No sexual act should be considered immoral as long as both parties are consenting adults.</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gendered Messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Men want as much as they can get on a first date.</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. In dating, the goal for men is “to score” with as many women as they can.</td>
<td>0.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. It’s difficult for men to resist their sexual urges.</td>
<td>0.91</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. It’s a man’s nature to have a roving eye.</td>
<td>0.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Men want sex, women want relationships.</td>
<td>0.76</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Men think about sex all the time.</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Men are more interested in women as potential sex partners and don’t want to be “just friends”.</td>
<td>0.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. It is worse for a woman to sleep around than it is for a man.</td>
<td>0.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Having sex while a woman is on her period is disgusting.</td>
<td>0.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricting Messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Sex outside of marriage is a sin.</td>
<td>1.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Sex belongs only in married relationships.</td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. You should abstain from sex until marriage to avoid getting pregnant or getting someone pregnant.</td>
<td>0.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Homosexuality is perverse and unnatural.</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. People who have sex before marriage typically regret it later.</td>
<td>0.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Abstinence is the best policy. Just say no.</td>
<td>0.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relational Messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Partners should be intellectually and emotionally intimate before they are physically intimate.</td>
<td>0.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Sex is best when the partners are in a loving and committed relationship.</td>
<td>0.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Sex should be a deep and beautiful expression of love between two people.</td>
<td>0.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. The decision to have sex is serious and should not be taken lightly. It comes a lot of responsibility.</td>
<td>0.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Don’t let anyone make you do anything you don’t want to do.</td>
<td>0.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Be yourself. Don’t try to act a certain way to please a boy/girl.</td>
<td>0.62</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Same-Sex Attraction Messages</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31. Homosexuality is okay.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Lesbian, gay, or bisexual people should have the same rights as everyone else.</td>
<td>0.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Homosexuality is a question of sexual orientation, not morality.</td>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2

*Factor Correlations*

<table>
<thead>
<tr>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<td>1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>.07</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>-.38</td>
<td>.48</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.37</td>
<td>.43</td>
<td>.34</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.37</td>
<td>.04</td>
<td>-.22</td>
<td>.18</td>
<td>---</td>
</tr>
</tbody>
</table>

**Self-objectification.** Self-objectification was measured using the Surveillance and Body-Shame subscales of the Objectified Body Consciousness Scale (OBC; McKinley & Hyde, 1996). The Surveillance subscale is an eight-item Likert-type scale
that assesses the extent to which a person views her body from a third person perspective. Participants were instructed to rate items such as, “During the day, I think about how I look many times”, on a scale of 1 (*Strongly disagree*) to 6 (*Strongly agree*). The reliability for the Surveillance subscale was good (α = .86). An overall composite score was taken by averaging the responses to the 8 items. Higher scores indicate higher levels of surveillance.

The Body-Shame subscale is an 8-item Likert-type scale that assess the extent to which a person feels shame about her body. Participants were instructed to rate items such as “When I’m not the size I think I should be I feel ashamed”, on a scale of 1 (*Strongly disagree*) to 7 (*Strongly agree*). The reliability of the Body-Shame subscale was acceptable (α = .87). An overall composite score was taken by averaging responses to the 8 items. Higher scores indicate higher levels of body shame.

**Condom use.** Condom use was assessed by asking four questions based on recommendations by Noar, Cole, & Carlyle (2006). Noar and colleagues (2006) suggested that, when assessing for condom use, researchers should assess for sex act specificity (e.g., receiving oral sex, vaginal sex). Accordingly, participants were instructed to “Think about the times you have had sex over the last six months and indicate how frequently you used condoms during each situation.” Participants were asked to rate questions such as “How often do you use condoms with your sexual partners during vaginal sex” on a 5-point Likert scale from 1 (*Never*) to 5 (*Always*) with an option of “N/A” if they had not participated in that type of sexual activity over the last six months. Many participants responded with “N/A” on the 3 non-vaginal sex items (e.g., “How often do you use condoms with your sexual partners during anal sex”).
resulting in a large proportion of missing data. These items were not included in analyses. Therefore, condom use was measured with a single item asking, “How often do you use condoms with your sexual partners during vaginal sex”. Higher values indicate greater frequency of condom use during vaginal sex.

**STI/STD testing.** Regular sexually transmitted infection (STI)/sexually transmitted disease (STD) testing was assessed by asking participants to report how frequently they test for HIV (a specific STD) and STIs. Response options were on a 5-point Likert-type scale of 1 (Never been tested), 2 (Every 2 years), 3 (Every year), 4 (Every 6 months), and 5 (More than every 6 months). The responses to the two items were averaged together. Higher values indicate more regular STI/STD testing. These items are adapted from Adam, Wit, Bourne, Knox, and Purchas (2010). A reliability analysis indicated excellent internal consistency ($\alpha = .91$).

**Health protective sexual communication.** Health protective sexual communication with a sexual partner was measured using the Partner Sexual Communication Scale (Milhausen, Wingood, DiClemente, Salazar, & Crosby, 2007). It is a 5-item Likert-type measure that asks participants: “During the past six months, how many times have you and your sex partner discussed”: (1) preventing pregnancy; (2) using condoms; (3) preventing the AIDS virus; (4) preventing STIs/STDs; and (5) your partner’s sex history. Response options were from 1 (Never) to 4 (A lot). A reliability analysis was conducted with all five items and was acceptable ($\alpha = .78$).

**Participant social desirability.** Participant social desirability was measured using the short form of the Marlow-Crowne Social Desirability Scale (Strahan & Gerbasi, 1972). This is a 10-item True/False questionnaire in which the incorrect items are
summed to indicate whether there is a presence of social desirability. Participants selected true (T) or false (F) for items such as “I never hesitate to go out of my way to help someone in trouble”. Items 1 through 5 were recoded such that a “true” response became 1 and a “false” response became 0, and items 6 through 10 were recoded such that a “true” response became 0 and a “false” response became 1. Responses were then summed to obtain a total score for social desirability. This measure has reasonable reliability with a K-R 20 reliability coefficient (used for dichotomous data) of .58.

**Demographics.** Demographic questions were asked of participants after completion of other measures. Participants were asked to report their age, ethnicity (i.e., White/Caucasian, Asian-American/Asian/Pacific Islander, Black/African-American, Hispanic/Latina, American Indian/Alaskan Native, Other), sexual orientation (i.e., straight, bisexual, lesbian, queer, other), and relationship status (i.e., single, in a monogamous relationship, other).
CHAPTER III

RESULTS

Preliminary Analyses

Means, standard deviations, skewness, kurtosis, score range, and correlations can be seen in Table 3. There were some significant correlations between specific predictor variables and particular outcome variables. Frequency of communication and accepting messages were positively correlated with health protective sexual communication with a partner. In addition, restricting messages was negatively correlated with STI/STD testing. Similarly, there were some significant correlations between specific predictor variables and particular mediator variables. Frequency of communication and accepting messages were positively correlated with body appreciation. In addition, accepting messages were negatively correlated with body shame, and restricting messages were positively correlated with body shame. Finally, there were some significant correlations between specific mediator variables and particular outcome variables. Body appreciation was positively correlated with health protective sexual communication with a partner. In addition, surveillance was negatively correlated with condom use and health protective sexual communication with a partner.

Social Desirability

Social desirability scores ranged between 0 and 10 and were normally distributed ($M = 5.16$, $SD = 1.91$, skewness = .01, kurtosis = -.25). There were 144 participants who scored a 6 or higher in social desirability, about 40% of the total number of participants.
Table 3

Means, Standard Deviations, Skewness, Kurtosis, and Correlations of Variables in the Path Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score Range</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Frequency_Comm</th>
<th>Accepting_Mess</th>
<th>Restricting_Mess</th>
<th>Body_Appreciation</th>
<th>Surveillance</th>
<th>Shame</th>
<th>Condoms_Vaginal</th>
<th>STL_Testing</th>
<th>Health_Comm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency_Comm</td>
<td>1 - 5</td>
<td>2.06</td>
<td>.84</td>
<td>.87</td>
<td>.37</td>
<td>-</td>
<td>.37**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepting_Mess</td>
<td>1 - 4</td>
<td>2.23</td>
<td>.88</td>
<td>.26</td>
<td>-1.10</td>
<td>.37**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restricting_Mess</td>
<td>1 - 4</td>
<td>2.16</td>
<td>1.04</td>
<td>0.43</td>
<td>-1.26</td>
<td>.02</td>
<td>.28**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body_Appreciation</td>
<td>1 - 5</td>
<td>3.52</td>
<td>.89</td>
<td>-0.21</td>
<td>-0.55</td>
<td>15**</td>
<td>.22**</td>
<td></td>
<td></td>
<td>-.03</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Surveillance</td>
<td>1 - 6</td>
<td>4.00</td>
<td>.92</td>
<td>-0.40</td>
<td>0.32</td>
<td>-1.10</td>
<td>-.07</td>
<td></td>
<td></td>
<td>.03</td>
<td>-.51**</td>
<td></td>
<td></td>
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<tr>
<td>Shame</td>
<td>1 - 6</td>
<td>3.43</td>
<td>1.12</td>
<td>-0.05</td>
<td>-0.66</td>
<td>-0.07</td>
<td>-.11**</td>
<td></td>
<td></td>
<td>.13**</td>
<td>.64**</td>
<td>.56**</td>
<td>.66**</td>
<td></td>
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<tr>
<td>Condoms_Vaginal</td>
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<td>1.57</td>
<td>0.35</td>
<td>1.44</td>
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<td>.06</td>
<td>.11**</td>
<td>.03</td>
<td>.03</td>
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<tr>
<td>STL_Testing</td>
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<td>1.10</td>
<td>0.66</td>
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<td>.08</td>
<td>.07</td>
<td>-.15**</td>
<td></td>
<td>.00</td>
<td>-.04</td>
<td>-.01</td>
<td>-.11**</td>
<td></td>
</tr>
<tr>
<td>Health_Comm</td>
<td>1 - 4</td>
<td>2.04</td>
<td>.89</td>
<td>1.00</td>
<td>.88</td>
<td>.12**</td>
<td>.17**</td>
<td>-.03</td>
<td></td>
<td>.16**</td>
<td>-.17**</td>
<td>-.04</td>
<td>.42**</td>
<td>0.12**</td>
</tr>
</tbody>
</table>

** p < .01

* p < .05
in the study. Correlations were examined between social desirability and all other variables. Though, there were some significant correlations they were all less than .30, ranging from -.24 to .24. Therefore, it was determined that effect sizes were too small to indicate any real effects of social desirability, so social desirability was not controlled for in this study.

**Hypotheses Testing**

The first and second set of hypotheses predicted positive relations between the predictor variables, frequency of communication and accepting messages, with the outcome variables, condom use, STI/STD testing, and health protective sexual communication. The third set of hypotheses stated that a negative relationship would exist between the predictor variable, restrictive messages, and the outcome variables. The last two sets of hypotheses involved the mediators, body appreciation and self-objectification, of the previously mentioned relations.

To test these hypotheses, first, a reliability analysis was conducted on the condom use for vaginal sex, STI/STD testing, and health protective sexual communication with a partner variables to determine if they were reliably measuring the same latent variable: protective sexual behaviors. Reliability was unacceptable ($\alpha = .22$). The STI/STD testing variable was removed in an attempt to improve the Cronbach’s alpha. However, reliability remained unacceptable ($\alpha = .47$). Therefore, these variables were used separately in the model rather than as one latent variable.

Second, this study estimated multivariate pathways concerning parent-teen frequency of communication, parent-teen accepting sexual messages, parent-teen restricting sexual messages as predictors of condom use during vaginal sex, STI/STD
testing, and health protective sexual communication with a partner. Body appreciation and self-objectification were investigated as potential mediators of these relations. The hypotheses were tested using path analysis, which was estimated with structural equation modeling using AMOS software. Prior to conducting the path analysis, assumptions regarding normality were checked. Variables were normally distributed (see Table 3).

The initial model was a saturated model to explore all possible relationships that prior research has insufficiently or not yet examined (see Figure 1). The model was then respecified to exclude nonsignificant correlations and paths. Fit indices were not examined in the saturated model because they would not provide any useful information on fit since a saturated model is statistically the best fitting model. However, because saturated models are just-identified and this is not ideal, recommendations in AMOS were followed to respecify the model. First, nonsignificant paths were deleted. After deletions, the surveillance variable became a predictor variable, which did not make conceptual sense. Therefore, surveillance was removed as a variable. As a result of the removal of surveillance, vaginal condom use no longer had any significant paths, so it too was removed. Following the removal of nonsignificant paths and ill-fitting variables, the resulting model was a more parsimonious model with only direct paths (see Figure 2). The respecified model’s fit was assessed utilizing the $\chi^2$ statistic (Model $\chi^2 = 16.29$, $df = 11$, $p = .13$), $\chi^2$ degrees of freedom ratio ($\chi^2/df = 1.48$), CFI (.98), TLI (.97), and RMSEA (.00; 90% CI: 0 to .06). The fit indices were acceptable (i.e., acceptable model fit indices would be around: Model $\chi^2 = 386.05$, $df = 11$, $p > .05$; $\chi^2/df = $ ratio less than 5 (Wheaton, Muthen, Alwin, & Summers, 1977), CFI = .90 or greater, TLI = .90 or greater, and
Figure 1. Saturated mediational model of types of parent-teen messages about sex as predictors of protective sexual health behaviors.

RMSEA = .10 or less). Triangulation of these indices indicate that the model should be retained and is a good fit for the data. Table 4 displays the standardized estimates of the respecified model.
Figure 2. Respecified model of types of parent-teen messages about sex as predictors of how emerging adult women feel about their bodies and protective sexual health behaviors. Bolded paths are significant.

Table 4

Standardized Estimates of Paths

<table>
<thead>
<tr>
<th>Path</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency_Comm → Health_Comm</td>
<td>.07</td>
</tr>
<tr>
<td>Frequency_Comm → STI_Testing</td>
<td>.09</td>
</tr>
<tr>
<td>Accepting_Messgs → Health_Comm</td>
<td>.15</td>
</tr>
<tr>
<td>Accepting_Messgs → Body_Appreciation</td>
<td>.17</td>
</tr>
<tr>
<td>Restricting_Messgs → STI_Testing</td>
<td>-.15</td>
</tr>
<tr>
<td>Restricting_Messgs → Shame</td>
<td>.14</td>
</tr>
<tr>
<td>Shame → Health_Comm</td>
<td>-.02</td>
</tr>
<tr>
<td>Frequency_Comm ↔ Accepting_Messgs</td>
<td>.37</td>
</tr>
<tr>
<td>Accepting_Messgs ↔ Restricting_Messgs</td>
<td>-.28</td>
</tr>
<tr>
<td>Body_Appreciation ↔ Shame</td>
<td>-.64</td>
</tr>
</tbody>
</table>

Note. Arrows indicate direction of predictive paths. Double sided arrows (↔) indicate correlational paths. Bolded standardized estimates are significant.
There were some correlational relations among predictor variables. Frequency of communication with parents about sex and accepting messages about sex were significantly positively correlated at $r = .37$ ($p < .001$), indicating that higher frequency of communication was associated with more accepting messages about sex. Accepting messages about sex were significantly negatively correlated with restricting messages at $r = -.28$ ($p < .001$), indicating that the more accepting messages there were, the fewer restricting messages there were. Though hypotheses were not made about the correlational paths of the predictor variables, it is not surprising that different types of parent-teen communication about sex are correlated with each other.

In addition, there were some predictive relations among accepting communication and some outcome variables. Accepting messages significantly positively predicted health protective communication with a partner among emerging adult women ($\beta = .15; p = .01$), indicating that the more accepting messages participants received as adolescents about sex, the greater likelihood there is of them engaging in health protective sexual communication with their partner. In addition, accepting messages significantly positively predicted body appreciation among emerging adult women ($\beta = .17; p < .001$), indicating that more accepting messages received by participants as adolescents about sex, the higher body appreciation they have currently. These results are in line with hypotheses that accepting messages would be related to more health protective sexual communication with a partner (i.e., H2c) and higher body appreciation (i.e., H4b).

Also, there were some predictive relations among restricting messages and some outcome variables. Restricting messages significantly negatively predicted STI/STD testing ($\beta = -.15; p = .01$), indicating that the more restricting messages participant
received as adolescents about sex the lower the likelihood of them engaging in STI/STD testing. In addition, restricting messages significantly positively predicted body shame among emerging adult women ($\beta = .14; p = .001$), indicating that the more restricting messages received by participants as adolescents about sex, the higher body shame they have currently. These results are in line with hypotheses that restricting messages would be related to less STI/STD testing (i.e., H3b) and greater self-objectification (i.e., H5c).

There was also a correlational relation between the two body attitudes. Body appreciation and body shame were significantly negatively correlated at $r = -.64 (p < .001)$, indicating that the more body appreciation the participant has the lower the likelihood of them also having body shame.
CHAPTER IV
DISCUSSION

Engagement in protective sexual behaviors, including condom use, STI/STD testing and communication with a sexual partner, is important for preventing the spread of sexually transmitted infections and diseases. Prior research suggests that parent-teen communication about sex is associated with engagement in protective sexual behaviors (DiClemente et al., 2001; DiLorio et al., 2003; Hirschman et al., 2006). Similarly, research suggests that body appreciation is related to protective sexual behaviors (Ramseyer Winter et al., 2018; Ramseyer Winter & Satinsky, 2014). In addition, researchers proposed studying the relation between self-objectification and risky sexual behavior (Moradi & Huang, 2008). Therefore, using path analysis, the current study examined the relations between frequency of communication, accepting sexual messages, and restricting sexual messages and condom use, STI/STD testing, and health protective sexual communication with a partner. In addition, body appreciation, body surveillance, and body shame were examined as mediators of these relations. However, the results indicated that no mediational paths were significant; therefore, only direct paths involving these variables and only the parsimonious model will be discussed.

The model demonstrated some significant relations between predictor and outcome variables. For example, accepting messages positively predicted health protective sexual communication with a partner. Accepting messages may be related to more health protective sexual communication with a partner because sex is treated as
normative rather than shameful. In addition, restricting messages negatively predicted STI/STD testing. This result makes sense due to the sexually objectifying nature of restricting messages (i.e., treating girls and women as if their value is in their virginity). As such, there may be shame in seeking out STI/STD testing services when one is supposed to remain “pure” and virginal. Together, these results are consistent with predictions (i.e., H2c, H3b).

Similarly, there were some significant relations between specific predictor variables and what were originally hypothesized to be mediator variables and are now outcome variables after model testing. For example, accepting messages positively predicted body appreciation. Though there is no previous research demonstrating a relation between these variables, a hypothesis was made based on the construct of body appreciation. Body appreciation is the praise of and focus on the body’s abilities and unique features regardless of the body’s appearance (Avalos et al., 2005). Parents, who communicate with their daughters about sex in an accepting manner, may generate more conversations about protective sexual behaviors, as their focus may be less on maintaining “purity” and more on respecting and appreciating one’s body. Therefore, the results are consistent with the literature on this construct. Restricting messages positively predicted body shame. Parents who provide restricting messages are objectifying their adolescent by insisting she remain “pure” (Valenti, 2009), otherwise her worth is diminished (Brochmann & Dahl, 2017). This message can become internalized by a teen girl leading her to self-objectify (Fredrickson & Roberts, 1997). These results are consistent with predictions (i.e., H4b, H5c).
Taken together, prior research, theory, and analyses in the current study indicate that there are some relations among the present study’s predictor (accepting and restricting messages) and outcome (body appreciation, body shame, STI/STD testing, and health protective sexual communication with a partner) variables. However, in the current study there were some unexpected lack of relations among specific variables. Specifically, previous research has indicated a relation among body appreciation and condom use, but the results of this study indicated no such relation. In addition, prior research has shown relations between frequency of communication and sexual behaviors; therefore, it was expected that frequency of communication would predict protective sexual behaviors. However, frequency of communication was found to have no relation with any protective sexual behaviors. This could be due to differences between indirect (e.g., parents responding to sex on TV, overheard conversations between parents and other adults, lessons in religious text) and direct communication (i.e., spoken communication between the parent(s) and adolescent). These lack of associations among variables could be a result of poor sampling and limitations to the measures used. These possibilities are discussed below.

Limitations

There are several limitations within this study. The sample consisted mostly of coupled participants. Coupled participants may not engage in protective sexual behaviors as they are in a relationship expecting that their partner will not be having sex with others. Because they believe they are not at risk for spreading and contracting STIs/STDs, they may not be using condoms or having health protective sexual communication. However, they may have still have had recent STI/STD testing
depending on how long they have been in a relationship (i.e., those who have been in a shorter relationship may have had testing more recently than those who have been in a longer relationship).

There are possible limitations of the measures as well. It is possible that the subscales used to measure accepting and restricting messages may not have adequately captured those constructs. In the literature, those subscales have been used to measure perceptions of receiving approval or disapproval of casual and marital sex from parents, peers, and media (Day Fletcher et al., 2015; Manago et al., 2015; Trinh et al., 2014). However, the present study intended to capture participants’ perceptions of accepting or restricting messages about sex from parents. In addition, frequency of communication did not indicate to participants if they should report on indirect communication from parents, direct communication, or both. Therefore, participants may have responded with any of these types of messages in mind. However, the purpose of the frequency items was to measure frequency of direction communication. Improving upon these measures may have resulted in more comprehensive measures of accepting and restricting messages as well as more accurate responses from participants for frequency of communication.

Finally, this study did not measure other variables that may be relevant. One such variable is participant knowledge of condom use. Though the majority of people probably know about the importance of using an external condom, many probably do not know about the importance of using a condom during oral sex or what a dental dam is. This could result in less frequent use of condoms for both giving and receiving oral sex, which may have affected non-significant patterns related to condom use.
**Future Directions**

Besides implementing the proposed modifications of this study, future studies may also want to examine other possible predictors of sexual behaviors. Media have been shown to be related to teen sexual behaviors. From a review of the literature, Wright (2011) concluded that there are positive relations between media portrayals of low responsibility and low risk sex and adolescents’ sexual behavior (e.g., early coital debut, having multiple sex partners, pregnancy, not using birth control, having had at least one STI). Therefore, media consumption may be related to risky sexual activity, especially in the absence of messages from parents about sex.

Similarly, what adolescents think their peers do and approve of regarding sex is positively related to teen sexual behaviors (Van de Bongardt, Reitz, Sandfort, & Dekovic, 2015). Van de Bongardt et al. (2015) conducted a meta-analysis and found a strong positive relation between teens’ sexual activity and their perceptions of their peers’ sexual behavior; that is, if teens believed other teens were having sex, they were more likely to engage in sexual activity. In addition, they found a positive relation between what teens think others approve of regarding sex and teen sexual activity; if teens thought others approved of teens having sex, they were more likely to engage in sexual activity. These relations were mediated by age. Older adolescents were more likely to engage in sexual activity if they thought other teens approved of it. Therefore, it is likely that the perceived behavior of peers is related to whether or not adolescents engage in sexual activity. By extension, likelihood of engaging in protective sexual behaviors may be related to perceptions of peers’ behaviors.
Engagement in protective sexual behaviors, including condom use, STI/STD testing and communication with a sexual partner, are important for preventing the spread of sexually transmitted infections and diseases. Therefore, it is important to investigate possible predictors of sexual health outcomes. Future studies should examine and compare the strength of relations among possible predictors of protective sexual behaviors. These studies may serve to improve sexual health by promoting protective sexual health behaviors starting in early adolescence.

Conclusion

To conclude, the purpose of this study was to examine if parent-teen frequency of communication about sex and parent-teen accepting and restricting messages were related to protective sexual behaviors via body attitudes. Results demonstrated that parental messages about sex are related to emerging adult women’s protective sexual behaviors, specifically STI/STD testing and health protective sexual communication with a partner. It is important that researchers study predictors of protective sexual behaviors to better understand how we might improve sexual health among emerging adult women.
REFERENCES


APPENDIX A

IRB APPROVAL

University of Colorado
Colorado Springs
Institutional Review Board (IRB) for the Protection of Human Subjects

Date: 11/7/2018

IRB Review

IRB PROTOCOL NO.: 19-652
Protocol Title: Sexuality Study
Principal Investigator: Amanda Hood
Faculty Advisor if Applicable: Elizabeth Daniels
Application: New Application
Type of Review: Expedited 7
Risk Level: No more than Minimal Risk
Renewal Review Level (If changed from original approval) if Applicable: N/A No Change
This Protocol involves a Vulnerable Population: N/A (No Vulnerable Population)
Expires: 6 November 2019

*Note, if exempt: If there are no major changes in the research, protocol does not require review on a continuing basis by the IRB. In addition, the protocol may match more than one review category not listed.
Externally funded: ☐ No ☐ Yes

Thank you for submitting your Request for IRB Review. The protocol identified above has been reviewed according to the policies of this institution and the provisions of applicable federal regulations. The review category is noted above along with the expiration date, if applicable.

Once human participant research has been approved, it is the Principal Investigator’s (PI) responsibility to report any changes in research activity related to the project:
• The PI must submit all protocol, recruitment, advertising, and consent form amendments/revisions to the IRB for approval.
• The PI must approve these changes prior to implementation.
• If you are a student, please note that it is required to include the IRB approval letter in the study when you submit the manuscript.
• The PI must promptly inform the IRB of any unexpected serious adverse events. All unexpected adverse events must be reported to the IRB within 24 hours (see 45CFR46.113(b)). Failure to comply with these federally mandated responsibilities may result in suspension or revocation of the project.
• Resume study with the IRB at least 10 business days prior to expiration.
• Notify the IRB when the study is complete.

If you have any questions, please contact Research Compliance Program Director in the Office of Sponsored Programs and Research Integrity at 719-255-3903 or rcb@uccs.edu

Thank you for your concern about human subject protection issues, and good luck with your research.

Sincerely yours,

Zak Valkyrie
Zak Valkyrie, PhD
IRB Reviewer
APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

1. Please indicate your age.
   ______

2. Please indicate your race/ethnicity.
   White/Caucasian
   Asian-American/Asian/ Pacific Islander
   Black/African-American
   Hispanic/Latino
   American Indian/ Alaskan Native
   Other (please indicate)
   ______________________

3. Please indicate your sexual orientation.
   Straight
   Bisexual
   Lesbian
   Queer
Frequency of parent-teen sexual communication

Parents often communicate with their children about sex as they are growing up. Please indicate how often your caregiver(s) communicated to you as you were growing up about the following behaviors (select the statement that best reflects your answer).

Answers based on 1 (Never), 2 (Once), 3 (A few times), 4 (Quite a bit), or 5 (A lot of times).

1. masturbation:
2. non-intercourse types of sexual activity (not full intercourse) with the opposite sex before marriage:
3. premarital sexual intercourse (sex before marriage) with the opposite sex:
4. same-sex sexual activity:
5. living together without being married:

Accepting versus restricting parent-teen messages

During our formative years (i.e., ages 5-18), we receive many messages about how men and women should behave in sexual relationships. These messages come in many forms, and can be verbal or nonverbal, direct or implied, true or false. What kind of messages did you receive about sex? Listed over the next few pages are 50 ideas about dating and sexuality that exist in society. For each message, use the 0 to 3 scale to indicate how strongly this notion was communicated to you by your parents. You may or may not agree with the message. We are interested only in whether or not you received it.

Answers based on 1 (None), 2 (A little), 3 (Some), 4 (A lot).

1. The primary goal of sexual intercourse is to have children.
2. Almost all men cheat at some time.
3. Having sex is just something fun to do.
4. Men lose respect for women who sleep with them too early in a relationship.
5. Sex should be a deep and beautiful expression of love between two people.
6. Men want sex, women want relationships.
7. Oral sex is dirty.
8. Sex outside of marriage is a sin
9. It’s better for a woman to use her “feminine charm” (e.g., flirting, body language) to indicate her interest than express it directly.
10. No sexual act should be considered immoral as long as both parties are consenting adults.
11. Homosexuality is perverse and unnatural.
12. Men think about sex all the time.
13. It is unsafe for a woman to be alone with a man she doesn’t know well.
14. Sex belongs only in married relationships.
15. It is inappropriate to masturbate or touch yourself for sexual pleasure.
16. You should abstain from sex until marriage to avoid getting pregnant or getting someone pregnant.
17. Having a “one-night stand” is okay as long as both partners agree that’s all it is.
18. Homosexuality is okay.
19. Partners should be intellectually and emotionally intimate before they are physically intimate.
20. Homosexuality is a question of sexual orientation, not morality.
21. It’s difficult for men to resist their sexual urges.

22. It is up to women to limit the sexual advances of men and to keep men from “going too far”.

23. In dating, the goal for men is “to score” with as many women as they can.

24. Having sex with someone should not necessarily imply your commitment to that person.

25. The decision to have sex is serious and should not be taken lightly. With it comes responsibilities.

26. Sex is best when the partners are in a loving and committed relationship.

27. It is worse for a woman to sleep around than it is for a man.

28. Men want as much as they can get on a first date.

29. Men should be the initiators in romantic relations and should be the ones to ask women out.

30. Women have just as many sexual urges and desires as men.

31. Having sex should be viewed as just a normal part of dating relationships.

32. Romantic/sexual relationships are best when they start as friendships.

33. Lesbian, gay, or bisexual people should have the same rights as everyone else.

34. Men are most interested in women as potential sex partners and don’t want to be “just friends” with them.

35. People who have sex before marriage typically regret it later.

36. The human body is nothing to be ashamed of.

37. Sex outside of marriage is perfectly fine as long as “protection” is used to prevent STDs and pregnancy.
38. Women can’t be trusted.
39. Be yourself. Don’t try to act a certain way to please a boy/girl.
40. Before a date, women should prep their bodies and remove unwanted body hair.
41. Being sexual is a natural part of being human.
42. It is not appropriate for women to be too interested in sex or to plan for sex.
43. Love hurts.
44. It’s a man’s nature to have a roaming eye.
45. Don’t let anyone make you do anything you don’t want to do.
46. Having sex while a woman is on her period is disgusting.
47. Abstinence is the best policy. Just say no.
48. Only you can know when you are ready for sex.
49. Disappointment is inevitable in sexual relationships.
50. Good girls don’t have sex.

**Body Appreciation**

Please indicate whether the question is true about you never, seldom, sometimes, often, or always.

1. I respect my body.
2. I feel good about my body.
3. I feel that my body has at least some good qualities.
4. I take a positive attitude towards my body.
5. I am attentive to my body's needs.
6. I feel love for my body.
7. I appreciate the different and unique characteristics of my body.
8. My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.

9. I am comfortable in my body.

10. I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).

**Self-Objectification**

Please indicate whether you strongly agree, agree, somewhat agree, somewhat disagree, disagree, or strongly disagree with each statement.

**Surveillance**

1. I rarely think about how I look.
2. I think it is more important that my clothes are comfortable than whether they look good on me.
3. I think more about how my body feels than how my body looks.
4. I rarely compare how I look with how other people look.
5. During the day, I think about how I look many times.
6. I often worry about whether the clothes I am wearing make me look good.
7. I rarely worry about how I look to other people.
8. I am more concerned with what my body can do than how it looks.

**Body Shame**

1. When I can’t control my weight, I feel like something must be wrong with me.
2. I feel ashamed of myself when I haven’t made the effort to look my best.
3. I feel like I must be a bad person when I don’t look as good as I could.
4. I would be ashamed for people to know what I really weigh.
5. I never worry that something is wrong with me when I am not exercising as much as I should.

6. When I’m not exercising enough, I question whether I am a good enough person.

7. Even when I can’t control my weight, I think I’m an okay person.

8. When I’m not the size I think I should be, I feel ashamed.

**Condom Use**

Think about the times you have had sex over the last *six months* and indicate how frequently you used condoms during each situation.

Answers based on 1 (Never), 2 (Almost never), 3 (Sometimes), 4 (Almost always), 5 (Always).

1. How often do you use condoms with your sexual partner(s) during vaginal sex?

2. How often do your sexual partner(s) use condoms when receiving oral sex from you?

3. How often do you use dental dams when receiving oral sex?

4. How often do you use condoms with your sexual partner(s) during anal sex?

**STI/STD Testing**

Please indicate the frequency of which you engage in each behavior.

Answers based on 1 (Never been tested), 2 (Every 2 years), 3 (Every year), 4 (Every 6 months), 5 (More than every 6 months).

1. I get tested for human immunodeficiency virus (HIV):

2. I test for sexually transmitted infections/diseases:

**Health Protective Sexual Communication**

During the past six months, how many times have you and your sex partner discussed:
Answers based on Never, Sometimes, Often, A lot.

1. Preventing pregnancy
2. Using condoms
3. Preventing the AIDS virus
4. Preventing sexually transmitted diseases
5. Your partner’s sexual history

**Sexuality**

1. Please indicate whether you have been sexually active in the past six months.
   - Yes, I have been sexually active in the past six months.
   - No, I have not been sexually active in the past six months.

2. Are/have you been in a monogamous (exclusive/committed) relationship over the past six months:
   - Yes
   - No

3. If yes, how long have you been / were you in the monogamous (exclusive/committed relationship)?
   - Years _____
   - Months _____

4. Please indicate your current relationship status:
   - Single
   - In a monogamous (exclusive/committed) relationship
   - Other _____

**Marlowe-Crowne Desirability Scale Short**
Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

1. I never hesitate to go out of my way to help someone in trouble.
2. I have never intensely disliked anyone.
3. When I don't know something I don't at all mind admitting it.
4. I am always courteous, even to people who are disagreeable.
5. I would never think of letting someone else be punished for my wrong doings.
6. I sometimes feel resentful when I don't get my way.
7. There have been times when I felt like rebelling against people in authority even though I knew they were right.
8. I can remember "playing sick" to get out of something.
9. There have been times when I was quite jealous of the good fortune of others.
10. I am sometimes irritated by people who ask favors of me.