

University of Denver

Digital Commons @ DU

Electronic Theses and Dissertations

Graduate Studies

2020

Sex, Love, and Masturbating: A Touchy Subject

Gabrielle Kaminsky-Bayer
University of Denver

Follow this and additional works at: <https://digitalcommons.du.edu/etd>



Part of the [Counseling Commons](#), [Counseling Psychology Commons](#), [Feminist, Gender, and Sexuality Studies Commons](#), and the [Gender and Sexuality Commons](#)

Recommended Citation

Kaminsky-Bayer, Gabrielle, "Sex, Love, and Masturbating: A Touchy Subject" (2020). *Electronic Theses and Dissertations*. 1780.

<https://digitalcommons.du.edu/etd/1780>

This Dissertation is brought to you for free and open access by the Graduate Studies at Digital Commons @ DU. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ DU. For more information, please contact jennifer.cox@du.edu, dig-commons@du.edu.

Sex, Love, and Masturbating: A Touchy Subject

Abstract

The topic of female masturbation has long been considered taboo and this has impacted the sparse research on female masturbation. In addition to the limited literature that exists on women's reasons for masturbating in general, there are even fewer studies regarding the motivation for women to masturbate *while in a relationship* or *how masturbating in a relationship impacts relational and sexual satisfaction*. To date, there has been no study that specifically looks at early adult women (25-35 years old) in relationships that assesses the attitudes and behaviors of masturbation on relational and sexual satisfaction. Additionally, this paper was structured from a complimentary framework. Much of the previous research has framed the investigations from a compensatory model as opposed to a complementary model. The compensatory model holds that masturbation and paired sexual activity are inversely related. In comparison, the complementary model describes masturbation as working in relationship to paired sexual activity rather than replacing it.

This paper answered the question: what factors are related to better relationship functioning when women masturbate in relationships? These factors included women's reasons for masturbating in relationships, attitudes about masturbating in relationships, and behaviors of masturbating. The participants were gathered through social networking websites, email listservs, and online forums. The results for the 296 participants were analyzed through regression models. The four main implications for this study regarding sexual satisfaction are the following: 1) women report more complimentary reasons for masturbating compared to compensatory, 2) women who feel positively about their masturbating also report higher sexual satisfaction, 3) women who discuss their masturbating habits with their partner also report higher sexual satisfaction. And finally, 4) sex toy use and sexually explicit material use does not impact sexual satisfaction. The findings of my study have implications for clinical practitioners as well as policy makers and activists. For clinical practitioners, the present study suggests that masturbation should continue to be discussed with clients as a normative practice that occurs within relationships. By confronting pervasive sex-negative societal messages, clinicians will be better equipped to treat clients more holistically and to incorporate sexual health into the therapeutic process.

Document Type

Dissertation

Degree Name

Ph.D.

Department

Counseling Psychology

First Advisor

Jesse Owen

Second Advisor

Patton Garriott

Third Advisor

Andi Pusavat

Keywords

Masturbation, Relational satisfaction, Sexual satisfaction

Subject Categories

Counseling | Counseling Psychology | Feminist, Gender, and Sexuality Studies | Gender and Sexuality | Psychology

Publication Statement

Copyright is held by the author. User is responsible for all copyright compliance.

Sex, Love, and Masturbating: A Touchy Subject

A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Gabrielle Kaminsky-Bayer

August 2020

Advisor: Jesse Owen

Author: Gabrielle Kaminsky-Bayer
Title: Sex, Love, and Masturbating: A Touchy Subject
Advisor: Jesse Owen
Degree Date: August 2020

Abstract

The topic of female masturbation has long been considered taboo and this has impacted the sparse research on female masturbation. In addition to the limited literature that exists on women's reasons for masturbating in general, there are even fewer studies regarding the motivation for women to masturbate *while in a relationship* or *how masturbating in a relationship impacts relational and sexual satisfaction*. To date, there has been no study that specifically looks at early adult women (25-35 years old) in relationships that assesses the attitudes and behaviors of masturbation on relational and sexual satisfaction. Additionally, this paper was structured from a complimentary framework. Much of the previous research has framed the investigations from a compensatory model as opposed to a complementary model. The compensatory model holds that masturbation and paired sexual activity are inversely related. In comparison, the complementary model describes masturbation as working in relationship to paired sexual activity rather than replacing it.

This paper answered the question: what factors are related to better relationship functioning when women masturbate in relationships? These factors included women's reasons for masturbating in relationships, attitudes about masturbating in relationships, and behaviors of masturbating. The participants were gathered through social networking websites, email listservs, and online forums. The results for the 296 participants were analyzed through regression models. The four main implications for this study regarding

sexual satisfaction are the following: 1) women report more complimentary reasons for masturbating compared to compensatory, 2) women who feel positively about their masturbating also report higher sexual satisfaction, 3) women who discuss their masturbating habits with their partner also report higher sexual satisfaction. And finally, 4) sex toy use and sexually explicit material use does not impact sexual satisfaction. The findings of my study have implications for clinical practitioners as well as policy makers and activists. For clinical practitioners, the present study suggests that masturbation should continue to be discussed with clients as a normative practice that occurs within relationships. By confronting pervasive sex-negative societal messages, clinicians will be better equipped to treat clients more holistically and to incorporate sexual health into the therapeutic process.

Table of Contents

Literature Review.....	1
Introduction.....	1
Definition.....	3
Prevalence Rates and Mental Health.....	3
Reasons Women Masturbate.....	5
Sexual Satisfaction, Relational Satisfaction, Sexual Communication.....	8
Masturbation and Sexual & Relational Satisfaction.....	9
Masturbation and Sexual Communication.....	11
Attitudes about Masturbation.....	13
Masturbation Behavior.....	14
Contextual Factors: Commitment Uncertainty, and Daily Hassles.....	19
The Current Study.....	21
Research Questions.....	21
Hypothesis.....	21
Hypothesis Chart.....	23
Methods Section.....	25
Participants.....	25
Measures.....	26
Female Genital Self-Image Scale.....	26
Experience of Masturbation.....	27
Female Sexual Subjectivity Inventory.....	27
Reasons for Masturbation.....	28
New Sexual Satisfaction Scale – Short Version.....	29
Feelings about Masturbation.....	30
Relationship Satisfaction Scale.....	31
Dyadic Sexual Communication Scale.....	32
Masturbating Behavior.....	32
Commitment Uncertainty – Short Scale.....	33
Daily Hassle Scale	34
Procedure.....	35
Results.....	37
Hypothesis One.....	37
Hypothesis Two.....	38
Hypothesis Three.....	41
Hypothesis Four.....	43
Hypothesis Five.....	44

Discussion.....	47
Complementary versus Compensatory.....	48
Sexual Satisfaction as Outcome.....	49
Relational Satisfaction as Outcome.....	52
Sexual Behavior Findings.....	54
Limitations and Future Research.....	56
Implications.....	59
 Bibliography.....	 64
 Appendices.....	 77
Appendix A: Tables.....	77
Appendix B Survey.....	81
Appendix C: Email Recruitment.....	89
Appendix D: Facebook Recruitment.....	89
Appendix E: Recruitment.....	90

List of Tables

Appendix A: Tables.....	77
Table 1.....	77
Table 2.....	78
Table 3.....	79
Table 4.....	80
Table 5.....	80
Table 6.....	80
Table 7.....	81
Table 8.....	81

Literature Review

Introduction

The topic of female masturbation has been considered taboo and shameful (Kaestle & Allen, 2011). By and large the topic of masturbation has been focused on male masturbation (Brenot, 2005). Within Western cultures (such as the US) women's sexualities, even private acts such as masturbation, are influenced and shaped by norms and values within society (Bowman, 2014). Historically, female heterosexuality has fulfilled two purposes, reproduction or male sexual pleasure (Vance, 1993). Despite these facts, masturbation has the possibility of feeling sexually empowering to women (Coleman, 2002). When women take ownership of their own pleasure through masturbation, they are in fact rebelling against traditional feminine norms of sexuality and could experience feelings of sexual empowerment (Tiefer, 1995,1996).

In addition to the limited literature that exists on women's reasons for masturbating in general, there are even fewer studies regarding the motivation for women to masturbate *while in a relationship* or *how masturbating in a relationship impacts relational and sexual satisfaction*. To date, there has been no study that specifically looks at early adult women (25-35 years old) in relationships that assesses the attitudes and behaviors of masturbation on relational and sexual satisfaction. There is a need that will be addressed within the research to understand women's attitudes and behaviors about masturbation and the reasons women identify for masturbating

(Bridges et al., 2003). It is important to understand women's reasons for masturbating in relationships as it can relate to feelings of sexual empowerment (Bowman, 2014), which may be associated with greater relationship functioning.

Most previous research has focused on exploring psychological outcomes of masturbation (Herbenick et al., 2009; Hurlbert & Whittaker, 1991), specific methods women use to masturbate (Herbenick et al., 2009), or women's frequency of masturbation (Arafat & Cotton, 1974; Herbenick et al., 2010; Laumann et al., 1994). However, the mixed results between women's masturbation habits and relational/sexual satisfaction tend to be divided due to methodological and theoretical differences. Much of the research has framed the investigations from a compensatory model (Arafat & Cotton, 1974; Greenberg & Archambault, 1973; Laumann et al., 1994) as opposed to a complementary model (Bowman, 2014). The compensatory model holds that masturbation and paired sexual activity are inversely related. In other words, masturbation is a sexual outlet used more frequently when paired sexual activity is unavailable due to a lack of partner or the partner's inability to satisfy or engage in sexual activity as frequently as the partner desires. In comparison, the complementary model describes masturbation as working in relationship to paired sexual activity rather than replacing it. In other words, masturbation is argued to enhance the sex life of partnered adults (Laumann et al., 1994; Pinkerton et al., 2002; Regnerus et al., 2017). This model postulates that increased paired sexual activity will increase sexual desire for masturbation in conjunction.

Definition

Masturbating has been defined in the literature in multiple ways since there is no consistent definition or description of its behavior (Kirschbaum, 2018). Some individuals have described masturbating as a solo activity, others have stated it is a partnered activity, and some have argued it was both. In a recent study of 563 men and women, participants indicated a variety of behaviors that were consistent with their understanding of masturbating (Kirschbaum, 2018). However overall, men and women were more likely to identify an act as masturbating if there was no sexual partner present and if they achieved orgasm. Although, women were more likely than men to identify masturbating as still occurring even if they did not orgasm (Kirschbaum, 2018). Therefore, for this study, masturbating will be understood as a sexual act that occurs without a partner present, with or without an orgasm achieved.

Prevalence Rates And Mental Health

Masturbating prevalence varies according to gender, age, race/ethnicity, education, and other characteristics. Research has continually noted that masturbation is more prevalent among men than women across all age cohorts (Arafat & Cotton; Herbenick et al., 2010; Petersen & Hyde, 2011; Oliver & Hyde, 1993). However, some argue the reason for this discrepancy is due to repressed societal sexual scripts or men's higher sex drive (Baumeister, Catanese, & Vohs, 2001; Leitenberg, Detzer, & Srebnick, 1993). While the answer is unclear, there is no denying that the stigma attached to female masturbation continues to be strong and prevalent (Fahs & Frank, 2013; Kaestle & Allen, 2011).

While the National Health and Social Life Survey (NHSL) in 1992 reported women's prevalence of masturbating to be around 38% compared to men's 61% (Das, 2007), other research has shown that the majority of women do masturbate and the prevalence hovers around 60% (Smith, Rosenthal, & Reichler, 1996). More recent estimates for the prevalence of female masturbation are closer to 85% to 90% (Bowman, 2014; Herbenick et al., 2010a; Mark, 2011). The reason for the discrepancy in prevalence rates for women is potentially due to survey interest. In other words, women who do feel more sexually empowered and more willing to discuss sex may be more likely to take a survey about sexual activity which causes a large discrepancy between the prevalence statistics. Masturbation is also difficult to study because it may make some participants feel uneasy (Kaestle & Allen, 2011). Specifically, masturbation is one of the least accurately reported sexual behaviors when assessed through polygraph tests (Bradburn, Sudman, Blair, & Stocking, 1978; Clark & Tiffet, 1966; Halpern, Udry, Suchindran, & Campbell, 2000).

Furthermore, the prevalence of masturbation changes with age with the rates increasing during adolescence, peaking in young adulthood, and then decreasing over the life span (Herbenick et al., 2010a; Laumann, et al., 1994). The age groups with the highest overall rates of masturbation are men and women aged 25 – 29 years old. Additionally, masturbating prevalence is varied based on racial/ethnic identities. Specifically, Black and Asian women have reported lower annual rates of masturbation than non-Hispanic White adults (Das, 2007). Additionally, as education level increases, so does reported frequency of masturbation. In the 1992 NHSL, only 25% of women who did not complete high school reported masturbating in the past year, compared to

60% of women who completed graduate degrees and endorsed masturbating within the year (Laumann et al., 1994). Overall, women with a college degree or higher reported the highest frequency of masturbating (Kraus, 2017). Finally, a study with a group of young French women identified that women in a relationship that masturbate once a week (13%) are almost as prevalent as women who are single and masturbating (15%; Kraus, 2017). Additionally, women in longer relationships tend to masturbate more than women who are single or in shorter-term relationships (Kraus, 2017).

The research exploring the relationship between masturbating and mental health have been mixed. Much of the original research about women masturbating was shaped from a perceived negative or stigmatized lens. These earlier studies noted a correlation between women's masturbation and pathological deviance (Clower, 1975), unattractiveness (Durham & Grossnickle, 1982), and promiscuity (Davidson & Moore, 1994). While many of these early studies were rooted in stigmatized ideas about women's masturbation, some recent researchers have noted women who are depressed are more likely to endorse masturbating and have a higher desire to masturbate (Brody, 2010; Cyranowski et al., 2004). Although, other researchers found women who masturbate tend to have higher self-esteem (Hurlbert & Whittaker, 1991; Shulman & Horne, 2003; Smith et al., 1996), improvement in mood (Escajadillo-Vargas et al., 2011), higher emotional intelligence (Burri, Cherkas, & Spector, 2009), more favorable body image (Shulman & Horne, 2003), and specifically better genital self-image (Herbenick, Schick, et al., 2011).

Reasons Women Masturbate

Despite the proven prevalence and positive outcomes from female masturbation, only recently have researchers begun to move the conversation away from prevalence of

masturbation and address women's reasons for masturbating. Researchers have noted a variety of motivational factors women endorse for masturbating. These include experiencing orgasm, physical pleasure, relief of sexual tension, feelings of self-affirmation and agency, stress relief, trying to fall asleep, and knowing one's body (Bowman, 2014; Carvalheira & Leal, 2013; Fahs & Frank, 2014; Laumann et al., 1994). Although, there is also research to support women's use of masturbation to substitute for sexually unavailable partners or lack of sexual satisfaction (Laumann et al., 1994). The National Survey of Sexual Health and Behavior (Laumann et al., 1994) indicated 32% of women masturbated because of partner unavailability.

While earlier researchers hypothesized that women in relationships masturbated solely because of sexual dissatisfaction and unavailability of a partner, recent research found contradictory results. Researchers Carvalheira and Leal (2013) found over half of their sample of women endorsed sexual pleasure as their primary reason of masturbating (65%), followed by coping with stress (32%), falling asleep (20%), and unavailability of a partner as only 8.6 percent. This is consistent with other research that indicates unavailability of a partner or being sexually unsatisfied is not the main reason women masturbate (Bowman, 2014; Coleman, 2002; Dekker & Schmidt, 2002; Gerressu et al., 2008; Kontula & Haavio-Mannila, 2003).

The reason for the discrepancy in results is directly tied to the differences in the compensatory versus complementary models. As previously stated, the compensatory model holds that masturbation is a sexual outlet used more frequently when paired sexual activity is unavailable due to a lack of partner or the partner's inability to satisfy or engage in sexual activity as frequently as the partner desires. The compensatory model

views masturbating as a substitute for sexual desires left unfulfilled by paired sexual activity (Dekker & Schmidt, 2003; Kontula & Haavio-Mannila, 2003; Pinkerton Bogart, Cecil, & Abramson, 2002; Regnerus, Price, & Gordon, 2017). Bridges and colleagues (2004) identified an inverse relationship with female masturbation and sexual satisfaction. Those that endorsed an increase of masturbation within 30 days also reported lower sexual satisfaction (Bridges et al., 2004). This helps explain how much of the research describes women as using masturbation only when paired sexual activity is unavailable.

In comparison, the complementary model helps describe how more recent literature describes masturbation as working in relationship with paired sexual activity rather than replacing it. As stated above, this model postulates that increased paired sexual activity will increase sexual desire for masturbation in conjunction. This model helps explore other reasons women masturbate such as, relieving tension, to sleep, and feelings of sexual agency. In other words, masturbation is argued to enhance the sex life of partnered adults (Laumann et al., 1994; Pinkerton et al., 2002; Regnerus et al., 2017;). A study conducted in the UK found women's frequency of masturbation increased with greater frequency of sex after four weeks (Gerressu et al., 2008). Additionally, Bowman's (2014) study demonstrated that lack of sexual satisfaction was only the fifth most common reason women masturbated. Other studies have found similar results that masturbating increases women's frequency of partnered sex (Carvalheira & Leal, 2013). Hurlburt and Whittaker (1991) reported married women who endorsed masturbating to orgasm also reported higher marital and sexual satisfaction. In a recent study done with over 15,000 adult American men and women, the researchers found women fit more

closely into a complementary model in their reasons for masturbating (Regnerus et al., 2017). Researchers have noted that sexual contentment was a better predictor of masturbation than frequency of sex. In other words, women who reported more sexual contentment tended to increase masturbation when increasing sexual frequency (Carvalheira & Leal, 2012; Regnerus et al., 2017). These findings are similar to other findings about women's use of masturbation based on the complementary model when compared to the compensatory model (Gerresu et al., 2008).

Sexual Satisfaction, Relational Satisfaction, and Sexual Communication

Before diving into the mixed results of the literature regarding masturbation, it is important to understand the relationship between sexual satisfaction, relational satisfaction, and sexual communication. Many studies have demonstrated the relationship between overall sexual satisfaction and relational satisfaction, and sexual communication (Haavio-Mannila & Kontula, 1997; MacNeil & Byers, 2009). Sexual satisfaction has been strongly correlated with relationship satisfaction with both married, partnered, and dating couples (Blumstein & Schwartz, 1983; Sprecher, 2002). Specifically, women who believe in the endurance of their relationship are more sexually satisfied (McNeil & Byers, 2005; Rosen & Bachmann, 2008). Additionally, these two constructs vary together, meaning that as sexual satisfaction decreases, so does relational satisfaction (Byers & Macneil, 2006; Rosen & Bachmann, 2008).

Furthermore, researchers have consistently reported the connection between sexual/relational satisfaction and sexual communication (Byers, 2011; Haavio-Mannila & Kontula, 1997; Velten & Margraf, 2017). Sexual communication is the willingness of partners to express their sexual desires and concerns openly. Women who feel

comfortable expressing their sexual needs and wants to their partner seem to be emotionally connected to their partners (Hurlbert et al., 1993). Sexual self-disclosures typically increase intimacy (Cupach & Metts, 1991; MacNeil & Byers, 2005, 2009), which positively impacts sexual and relational satisfaction. Researchers MacNeil and Byers (2005, 2009) describe how sexual self-disclosures or sexual communication can help change sexual scripts. In a recent study of 220 married couples, partners who communicated indirectly about their desires and concerns were associated with lower sexual satisfaction (Theiss, 2011). Additionally, women who indicated higher rates of sexual communication between partners were positively related to sexual satisfaction (Velten & Margraf, 2017). Thus, it appears sexual communication is associated with sexual satisfaction by increasing the chances of having one's sexual needs met and by increasing emotional closeness.

Masturbation and Sexual and Relational Satisfaction

In regards to the compensatory/complementary models, research examining sexual satisfaction and women who masturbate have found a negative correlation between masturbation and sexual satisfaction (Bancroft, Long, & McCabe, 2010; Santtila et al., 2008; Velten & Margraf, 2017) and some have found a positive relationship between masturbation and better sexual functioning overall (Herbenick et al., 2009; Hurlbert & Whittaker, 1991). These two sides of the argument reflect the crux of the complementary model verses compensatory model argument.

Within the complementary model, there were several studies that discussed the benefits of masturbating on sexual satisfaction (Davis et al., 1996; Hurlbert & Whittaker, 1991). Hurlbert and Whittaker (1991) found women who masturbate, compared to those

who denied masturbating, reported higher sexual satisfaction. Specifically, more recent studies have noted a relationship between women who orgasm during masturbating with sexual satisfaction (Phillipsohn & Hartmann, 2009). They have stated that women who are able to orgasm during masturbating report higher levels of sexual satisfaction when engaging with a partner (Hurlbert & Whittkaer, 1991). Researchers argued that if women were able to achieve orgasm during masturbation, they might find it easier to orgasm with a partner. Additionally, when comparing women who identify as lesbian versus heterosexual, an early study noted lesbian women were more sexually satisfied with partnered sex and endorsed masturbating more frequently (Coleman, Hoon & Hoon, 1983). These studies provide some support for the complementary model of masturbating in relationship in that masturbating helps enhance women's sexual experiences with a partner instead of replacing it.

Although, women's frequent masturbation was related to lower sexual satisfaction (Brody & Costa, 2009; Velten & Margraf, 2017). Women in a relationship who endorsed masturbating once a week were twice as likely to report being sexually dissatisfied compared to women in a relationship who were sexually satisfied (Kraus, 2017). Bridges and colleagues (2004) also noted that as women's masturbation increased within 30 days, their reports of sexual satisfaction decreased. While the direction of the relationship between sexual satisfaction and masturbation is unclear, as women's masturbation increased to a weekly basis, their self-reported sexual satisfaction decreased. This may be due to women becoming sexually unsatisfied so they increase their masturbation or they increase their masturbation and become less sexually satisfied. Either way, this research is closely aligned to the compensatory model of understanding.

Similar to sexual satisfaction and masturbation, the literature on masturbating and relationship satisfaction has led to mixed results. While some studies have shown a positive relationship between masturbating and relationship satisfaction (Petersen & Hyde, 2011; Zhang et al., 2012) others have shown a negative relationship (Zamboni & Crawford, 2002). In a sample of Finnish men and women, women endorsed an overall satisfaction with their amount of masturbation in their relationships (Santtila et al., 2008). However, women who masturbated had a negative correlation with relationship satisfaction (Santtila et al., 2008). These findings were supported by other studies that noted higher rates of solo masturbation (without a partner) were associated with relationship dissatisfaction (Langstrom & Hanson, 2006). Although, it is important to note that women who endorse masturbating more indicated having more stable partners over their lifetime (Das, 2007). These conflicting results seem to indicate the possible presence of one or multiple moderators impacting the relationship between masturbating and sexual/relational satisfaction. These possible moderators could be sexual communication, sexual empowerment, and sexual entitlement. These will continue to be discussed and tested in the paper.

Masturbation and Sexual Communication

There are very few studies that specifically focus on how women's masturbating may impact sexual communication. There have been a few studies that address the benefits of masturbating and women's ability to openly communicate their masturbating habits to their partner in order to better advocate for their sexual wants and needs more effectively (Kaestle & Allen, 2011). This could be due to the discussion of masturbation in intimate relationships as a taboo subject (Kraus, 2017). Many women reported fearing

that disclosing their masturbation habits to their partner would lead their partner to believe they are sexually unsatisfied (Kraus, 2017). It is possible that sexual communication could be moderating the relationship between masturbating and sexual/relational satisfaction.

This fear led researchers to believe that women would be more likely to discuss their masturbating habits with their female friends instead of significant others. However, contrary to previous research that women are more likely to discuss their sex lives with their female friends (Rountree et al., 2017), more heterosexual women are likely to discuss their masturbation habits with their intimate partners than friends (Kraus, 2017). In the Kraus (2017) study, over half of her participants in a heterosexual relationship discussed masturbation with their partners. One explanation was women felt they would be judged by their female peers but felt less judgment by their male partners since masturbation for men carries less stigma (Kraus, 2017). However, it is important to note that only women who reported high sexual satisfaction and increased sexual frequency were willing to disclose their masturbation habits to their partners (Kraus, 2017). Therefore, while the slight majority of women (55%) were willing to discuss their masturbation with their partners, this was only when they felt secure in the knowledge that their partner would not construe the information to imply a lack of satisfaction with their sex lives. For some women, they felt comfortable disclosing their habits with their partner because they felt sexually satisfied. Whereas other women who used masturbating as compensatory because they felt less sexually satisfied did not disclose their masturbating to their partner.

Attitudes about Masturbation

Women's attitudes towards their masturbation while in a relationship may impact their relational and sexual satisfaction. How women feel about masturbating while in a relationship, positively or negatively, is shaped by culture and society. In other words, due to the historically stigmatized nature of female masturbation, women have endorsed feelings of shame and guilt about masturbation (Cardamakis, Vinakos, Lambous, & Papathanasious, 1993; Coleman, 2002; Gagnon, Simon, & Berger, 1970; Greenberg & Archambault, 1973; Halpern et al., 2000; Hogarth & Ingham, 2009). Repeatedly, women have reported feeling more stigma about masturbating than men (Kaestle & Allen, 2011) and in part because female masturbation has been more socially rejected than male masturbation. Overall, women acknowledged a more negative attitude about masturbating in general compared to their male counterparts (Clark & Wiederman, 2000).

Previous research noted some women's embarrassment of using sex toys to masturbate and attempting to hide their sex toys (Fahs & Swank, 2013; McCaughey & French, 2001). Women's attitudes about their masturbation habits (vibrator use) seemed to be impacted by their fear that their male partners would be intimidated (Herbenick et al., 2011; Fahs & Frank, 2014). Interestingly, Herbenick and colleagues noted significantly more women endorsed this fear than men reported feeling intimidated. This may indicate women have more concerns about how their male partners will react to their vibrator use than men themselves have about women's vibrator use (Herbenick et al., 2011). This fear of intimidating their male partners may lead some women to not discuss their vibrator use with their partners (Herbenick et al., 2010). Researchers have observed women rely more heavily on their male partner's approval and comfort with masturbating to determine their

attitudes about masturbating (Kaestle & Allen, 2011). In other words, women feel more positive about their masturbation habits if their male partner is supportive of female masturbation, but report more negative or stigmatized views of their masturbation if they fear their male partner does not approve.

A recent study of young Portuguese women indicated only 15.4% felt shame and 10.3% felt guilt about their masturbating behavior (Carvalho & Leal, 2013).

Additionally, feelings of shame were more associated with younger women because there was a decrease in shame with the older age groups (47-56 year olds) (Carvalho & Leal, 2013). However, women in the older age groups tended to endorse higher reports of overall well-being and most participants endorsed no feelings of guilt about masturbating. Additionally, a qualitative study found that many young women rejected stigma associated with masturbation and developed a narrative of embracing masturbation as a critical aspect of sexual development and self-discovery (Kaestle & Allen, 2011). These women identified that the media (*Sex and the City*) and exposure (novelty parties) enabled them to view masturbation as non-stigmatizing (Kaestle & Allen, 2011). Some researchers also noted that women's attitudes about masturbating in a relationship may be shifting as societal stigma and practices may be shifting (Marks & Wosick, 2017).

Masturbation Behavior

In addition to women's attitudes toward masturbating, the behavior of masturbating impacts sexual and relational satisfaction while in a relationship. The behaviors that will be addressed here are the use of sex toys and sexually explicit material, which includes pornography and erotica. While sexual enhancement products (i.e., sex toys) were once considered taboo, they are becoming more and more prevalent

for women (Curtis, 2004; Herbenick et al., 2009; Rosenberger et al., 2012). Women report a range of uses for sex toys including solo masturbation, intercourse, and sexual foreplay with a partner (Herbenick et al., 2009; Herbenick et al., 2010; Schick et al., 2011). Vibrator use in the United States is common with more than half of women using vibrators while masturbating alone or in their partnered sexual activity (Herbenick et al., 2009; Reece et al., 2009). Overall, a recent study of American women's vibrator use noted 52.5% of women used vibrators and 46% used them during solo masturbation (Herbenick et al., 2009). Additionally, vibrator use has been shown to be slightly higher among bisexual and lesbian women compared to heterosexual women (Herbenick et al., 2010). The first study to assess vibrator use among lesbian women found half of the participants endorsed using a vibrator (Califia, 1979). More recent data shows that three-fourths of self-identified lesbian and bisexual women have used a vibrator (Lindley et al., 2003; Schick et al., 2011).

However, women's use and attitude about vibrators are connected to their sexual experience. In the only study to date that assessed women's and men's attitudes about women's vibrator use, they noted that approximately half of their sample reported positive attitudes about vibrators with fewer than 10% endorsing negative views (Herbenick et al., 2011). Overall, participants indicated they believed vibrators could positively impact women's sexual functioning (such as orgasm ease), and positively contribute to the dynamics of their sexual relationship. While some participants believed vibrator use was indicative of being single or desperate, these were the least endorsed items. Women who endorsed positive feelings about vibrator use were correlated with

increased sexual desire, arousal, lubrication, orgasm, absence of sexual pain, and overall sexual functioning (Herbenick et al., 2009; Herbenick, Reece, et al., 2011).

In addition to women's use of sex toys while masturbating, it is important to consider the use of sexually explicit material. Overall, there is a positive relationship between viewing sexually explicit material and masturbation (Bacak & Stulhofer, 2011; Hald, 2006; Kontula & Haavio-Mannila, 2003). While pornography is less used by women compared to men, (Petersen & Hyde, 2010) it is become more apparent that women are engaging in sexually explicit material while masturbating (Bacak & Stulhofer, 2011).

Gender differences in viewing sexually explicit web sites are robust. A national survey of adults in the United States found that 32% of men had accessed a sexually explicit web site in the last year, compared to only 4% of women (Buzzell, 2005). In addition, pornography was involved 53.8% of the time when men masturbate, but only 16.8% of the time when women were masturbating in a sample of young Dutch participants (Hald, 2006). Some researchers believe this discrepancy is due to the lack of social acceptance to use pornography as part of solo sexual acts rather than with a sexual partner (Traeen et al., 2004). Researches have noted that the type of sexually explicit material women view is different than male viewership (Senn & Radtke, 1990). Women tend to respond more positively to sexual material that portrays men and women as equal and negatively to images of perceived degradation and dominance (Krafka et al., 1997; Senn & Radtke, 1990). Research indicates women more commonly seek out chat rooms and erotic narratives as opposed to explicit sexual content (Delmonico & Miller, 2003).

When looking specifically at women's use of sexually explicit material while masturbating, researchers found some benefits such as increased sexual arousal and interest (Chivers, Seto, & Blanchard, 2007; Fisher & Byrne, 1978; Mann et al., 1971; Schmidt & Sigusch, 1970), acquiring or imitating pleasurable sexual behavior (Kohut & Fisher, 2013), and the reduction of sexual anxiety (Fyfe, 1979; Wincze & Caird, 1976; Wishnoff, 1978). Additionally, sexually explicit material that has training interventions for female masturbation has allowed women who were previously unable to orgasm to achieve orgasm (Jankovich & Miller, 1978; McMullen & Rosen, 1979; Robinson, 1974). Researchers have found positive benefits of both vibrator use and sexually explicit material in general (Coleman, 2002).

Similar to all aspects of this body of literature, the results for sexually explicit material use and its relationship to couples' relational and sexual satisfaction have been mixed. Some of the literature argues that the use of sexually explicit material for women within relationships decreases sexual and relational satisfaction while other research states it helps enhance the relational factors. In general, being in a romantic relationship is correlated with reduced use of sexually explicit media (Bridges, McGahan, Andrews, & Anton, 2009; Buzzell, 2005). Some researchers have found pornography use, by men or women in a relationship, is detrimental to the couple's relational and sexual satisfaction (Hare et al., 2014; Lambert et al., 2012; Morgan, 2011; Peter & Valkenburg, 2006; Poulsen et al., 2013; Stack et al., 2004; Wright et al., 2014; Zillmann & Bryant, 1988). According to Stack and colleagues (2004), using a large sample of over 500 adult sexually explicit media users, people in reportedly happier marriages were 60% less likely to use sexually explicit media in the prior month than people who were dissatisfied

with their relationship. Specifically, Zillmann (2000) found exposure to pornography within a relationship leads to diminished trust, no hope for sexual exclusivity, and cynical attitudes towards love. Similar to the literature on masturbation in general, this research fits more within the compensatory model in which women are using pornography because they are sexually unsatisfied.

However, some studies have addressed both the potential benefits and consequences of pornography use on couples' relationships (Bridges & Morokoff, 2011; Poulsen et al., 2013). Collectively, they found that women's pornography use may be associated with increased sexual and relational fulfillment. This fits within the complementary model that pornography use can improve a women's sexual and relational satisfaction. Furthermore, some studies have demonstrated that pornography use may be associated with improved sexual communication (Albright, 2008; Daneback et al., 2009; Grov et al., 2011). Kohut and researchers (2017) reported that pornography use in couples made communication easier and couples were able to learn about each other through sexual self-disclosures or sexual communication such as likes and dislikes. These disclosures of pornography use also enabled feelings of closeness and intimacy in the relationship (Kohut et al., 2017). Overall, researchers have found women who view sexually explicit material believe their exposure improves their sex lives (Hald & Malamuth, 2008; Nawy, 1973; Rogala & Tyde n, 2003).

Some researchers believe the reason for this discrepancy is due to the methodology approaches implemented within this field (Kohut, et al., 2017). They argue that the research regarding pornography's impact on couples' relational satisfaction has been a confirmatory search for the negative consequences of usage

(Kohut et al., 2017). Studies that adopt harm-focused approaches place limitations on what can be learned about the effects of pornography use. Similar to earlier statements, studies that assume pornography will be harmful to individuals and relational satisfaction will either confirm negative effects or fail to confirm negative effects while ignoring findings that indicate neutral or positive effects simply by searching only for negative impacts (Kohut et al., 2017).

Contextual Factors: Commitment Uncertainty and Daily Hassles

The reasons women would engage in masturbating behaviors while in a relationship may be influenced by contextual factors within the relationship. These factors include whether the women feel committed to the relationship. If she does not feel committed, she may be engaging in more compensatory behavior as opposed to complementary. Commitment uncertainty arises when partners are uncertain about whether they want to be in their exclusive relationship. In other words, commitment uncertainty is best understood as wavering, fleeting, and unpredictable patterns of behavior, which impact couple identity and long-term vision of the relationship (Owen et al., 2014).

Furthermore, similar to relational contextual factors that could impact women's motivation for masturbating in relationships, daily hassles may impact their attitude and behavior or masturbating. Theoretically, women may be engaging in masturbation in their relationship due to external hassles in their life that make it difficult or unpleasurable to engage in sexual activity with their partner. This would fit more within the complementary model as opposed to the compensatory model because the partner

is available but the women are using masturbation more to enhance paired sexual activity instead of replacing it.

Research has consistently demonstrated that stress impacts an individual's intimate relationship. Stress has been shown to impact communication problems and relational dissatisfaction (Buck & Neff, 2012; Story & Bradbury, 2004). Extradynamic stress from daily hassles reduces relational satisfaction by increasing intra-dyadic stress (Falconier et al., 2015). Couples who are stressed from daily hassles may spend less quality time together and this reduces their feelings of togetherness and intimacy (Bodenmann et al., 2007; Falconier et al., 2015; Ledermann et al., 2010). Therefore, it is crucial to have a better understanding of women's daily hassles to better interpret and make meaning of their reasons for masturbating and how those motivations impact their relational and sexual satisfaction.

The Current Study

Research Questions

The overarching research question is: what factors are related to better relationship functioning when women masturbate in relationships? These factors include women's reasons for masturbating in relationships, attitudes about masturbating in relationships, and behaviors of masturbating. I also examine the role of contextual factors (commitment uncertainty and daily hassles) among these associations.

Hypothesis

Predictors: Reasons for Masturbating (Scale), Attitude about Masturbating (Feelings about Masturbating Scale), and Masturbating Behaviors (Scale),

Outcomes: Relational Satisfaction (Relationship Satisfaction Assessment Scale) and Sexual Satisfaction (New Sexual Satisfaction Scale)

Moderators: Sexual Communication (Dyadic Sexual Communication Scale), Sexual Self-Love (Female Genital Self-Image Scale), and Sexual Entitlement (Female Sexual Subjective Inventory)

Controls: Commitment Uncertainty (Scale) and Daily Hassles (Scale)

Hypothesis 1a & 1b: Women who endorse more positive attitudes about masturbating (subscale: sexual empowerment) will also endorse higher relationship (H1a) and sexual satisfaction (H1b), after controlling for commitment uncertainty and daily hassles.

Reason: Women's reasons for masturbating are from a complementary theoretical model and therefore, women are using masturbation to enhance their sexual relationships instead of compensating for their lack of sexual satisfaction. Furthermore, women who feel more positively about masturbating in general and less impacted by stigmatizing societal messages will feel more sexual and relational satisfaction in their relationships. Additionally, those who report lower commitment uncertainty and lower daily hassles will have more positive feelings about masturbating.

Hypothesis 2a & 2b: Women's sexual communication and feelings of sexual self-love (female genital self-image scale) will moderate the relationship between negative masturbation attitudes (combined subscales: 2 and 3: shame and fear of selfishness) and higher relational (H2a) and sexual satisfaction (H2b).

Reason: If women feel shame or guilt about their masturbating, their ability to communicate this to their partner will enhance their relational and sexual satisfaction and feelings of sexual confidence.

Hypothesis 3a & 3b: Women who report higher sexual entitlement (combined subscales 1 and 2: sense of entitlement to sexual pleasure from masturbating and partner) will moderate the relationship between more positive attitudes about masturbating (subscale: sexual empowerment) and higher relational (H3a) and sexual satisfaction (H3b).

Reason: Women who report higher attitudes of feeling powerful, sexy, and strong will also report high sexual and relational satisfaction because they are able to meet their own sexual needs through masturbating without feelings of shame and guilt while also feeling more entitled to sexual satisfaction from their partner.

Hypothesis 4a & 4b: Women who report sexual satisfaction (H4a) and relational satisfaction (H4b) will also report more complimentary reasons for masturbating (combined subscales 1-3: sexual pleasure, learning about body/pleasure, and release) as opposed to compensatory reasons (combined subscales 4 and 5: substitute for partnered sex and sexual dissatisfaction).

Reason: Research has shown that women who are sexually satisfied and happy in their relationships are more likely to masturbate from a complimentary model, not a compensatory model.

Hypothesis 5a & 5b: Women who endorse more sexual behavior (use of sex toys and sexually explicit material) will also endorse higher sexual (H5a) and relational satisfaction (H5b), as moderated by feelings of sexual entitlement (combined subscales 1-2: sense of entitlement to sexual pleasure through masturbating and partner).

Reason: Women who feel more sexually entitled will feel comfortable using sexually explicit material or sex toys and based on previous research, from the complimentary view, women’s use of sex toys and explicit material can increase satisfaction and relational satisfaction.

Hypotheses Chart

	Hypothesis	Measures	Subscales
H1a and H1b	Women who endorse more positive attitudes about masturbating (subscale: sexual empowerment) will also endorse higher relationship (H1a) and sexual satisfaction (H1b), after controlling for commitment uncertainty and daily hassles.	Predictors: -Feelings about masturbating Controls: - Daily hassles - Commitment uncertainty	- Sexual empowerment

H2a and H2b	Women's sexual communication and feelings of sexual self-love (female genital self-image scale) will moderate the relationship between negative masturbation attitudes (combined subscales: 2 and 3: shame and fear of selfishness) and higher relational (H2a) and sexual satisfaction (H2b).	<p>Moderator:</p> <ul style="list-style-type: none"> - Dyadic sexual communication scale - Female genital self-image scale <p>Predictor:</p> <ul style="list-style-type: none"> - Feelings about masturbating scale 	<ul style="list-style-type: none"> - Sexual communication (only 1 factor) - Sexual self-love (only 1 factor) - Shame - Fear of selfishness
H3a and H3b	Women who report higher sexual entitlement (combined subscales 1 and 2: sense of entitlement to sexual pleasure from masturbating and partner) will moderate the relationship between more positive attitudes about masturbating (subscale: sexual empowerment) and higher relational (H3a) and sexual satisfaction (H3b).	<p>Moderator:</p> <ul style="list-style-type: none"> - Entitlement in sexual situations scale <p>Predictor:</p> <ul style="list-style-type: none"> - Feelings about masturbating scale 	<ul style="list-style-type: none"> - Sense of entitlement to sexual pleasure from masturbating - Sense of entitlement to sexual pleasure from partner - Sexual empowerment
H4a and H4b	Women who report sexual satisfaction (H4a) and relational satisfaction (H4b) will also report more complimentary reasons for masturbating (combined subscales 1-3: sexual pleasure, learning about body/pleasure, and release) as opposed to compensatory reasons (combined subscales 4 and 5: substitute for partnered sex and sexual dissatisfaction).	<p>Predictor:</p> <ul style="list-style-type: none"> - Reasons for masturbating scale 	<ul style="list-style-type: none"> Complimentary Reasons - Sexual pleasure - Learning about body/pleasure - Release Compensatory Reasons: - Substitute for partnered sex - Sexual dissatisfaction
H5a and H5b	Women who endorse more sexual behavior (use of sex toys and sexually explicit material) will also endorse higher sexual (H5a) and relational satisfaction (H5b), as moderated by feelings of sexual entitlement (combined subscales 1-2: sense of entitlement to sexual pleasure through masturbating and partner).	<p>Predictor:</p> <ul style="list-style-type: none"> -Masturbating behavior <p>Moderator:</p> <ul style="list-style-type: none"> - Entitlement in sexual situations scale 	<ul style="list-style-type: none"> - Sex toy use - Sexually explicitly material use - Sense of entitlement to sexual pleasure from masturbating - Sense of entitlement to sexual pleasure from partner

Methods Section

Participants

To determine the necessary number of participants, a G*Power analysis was conducted for a linear multiple regression. The assumption of a small to medium effect size, ($f = .07$), alpha error at .01, and power of .8, and 3 predictors (and adding for 2 control variables), indicate that at least 263 participants were needed. However, with more conservative power (.95) 376 participants were needed. Therefore, the goal was to ideally obtain 376 participants. The inclusion criteria were women (cisgender, gender nonconforming, gender non-binary, and transgender women), between the ages of 25 to 35 years old, who are currently in a romantic, exclusive relationship for at least a month, and reported masturbating (alone) while in their current relationship.

There were 762 participants that started the survey but 340 participants were excluded because they completed less than 80 percent of the survey. Additionally, 4 participants were removed for not being in a current relationship and 6 participants were removed for not being between the ages of 25-35 years old. Furthermore, 15 participants were removed for never having masturbated in their current relationship and one participant was removed for identifying as male. The final sample was 396 participants.

Overall, before removing participants, 96% of the total sample reported masturbating. Within the final sample, 89.1% of participants endorsed masturbating in the past three months and 64.6% endorsed masturbating within the past week. The mean

age was 27.7 years old. Within the sample, 97.2% identified as cisgender female, followed by gender nonconforming (1.3 percent), gender queer (.8 percent), and transgender (.8 percent). Approximately 74% of the participants identified as heterosexual followed by almost 15% identifying as bisexual. The sample was majority White (81.3%) followed by two or more identities (6.8 percent), Asian/Pacific Islander (4.5 percent), Latinx (4 percent), and African American (2.3 percent). Finally, the majority of participants had earned a bachelor's degree (38%) or higher (49.5%). More demographic information can be found in Table 1.

Measures

The survey initially asked about demographic items that included information about age, race/ethnicity, sexual orientation, education level, religious and spiritual views and relationship status. Additionally, the survey defined masturbation as an act of sexual enjoyment that occurs without a partner present. A copy of the survey is available under Appendix A.

Female Genital Self-Image Scale. The Female Genital Self-Image Scale (FGSIS; Herbenick & Reece, 2010) was used to assess women's feelings of genital self-empowerment and attitudes towards their genitals. The scale has seven items and participants rate their agreement on a 4-point Likert scale ranging from 1 (Strongly disagree) to 4 (Strongly Agree). Some sample items from the scale include: "I feel positive about my genitals" and "I think my genitals smell fine." The scale was created and normed on adults (mean = 29.55 years old) who identified as White (88.7%), heterosexual (91.1%), partnered (45.7%), and college educated (77.2%; Herbenick & Reece, 2010). Previous research has used the FGSIS and found the scale to have an alpha

range of 0.87 to .89 (Bowman, 2014; DeMaria et al., 2012; Herbenick & Reece, 2010).

The alpha was .81 for the current study and was referred to as “Sexual Self-Love” throughout the paper. Women’s scores on the FGSIS abbreviated version have been positively related to women’s vibrator use and frequency of masturbation (Herbenick et al., 2011).

The Experience of Masturbation. Women’s masturbating experience and frequency were assessed through four yes or no items that were previously used in similar research (Bowman, 2014). The participants were informed that for the purposes of this study, masturbating is defined as a solo activity without the presence of their partner. These items included 1) “Have you ever masturbated in your current relationship?” 2) “Have you masturbated within the past year?” 3) “Have you masturbated within the past three months?” And 4) “Have you masturbated within the past week?” If the participant endorsed ever masturbating, they were prompted to indicate their agreement with the following two statements: “Masturbating is important to me” and “I think the fact that I masturbate has improved my pleasure in my relationship.” These statements were asked on a 6-point Likert-type scale ranging from strongly disagrees to strongly agree.

Female Sexual Subjectivity Inventory. Two subscales (7 items total) of the Female Sexual Subjectivity Inventory (FSSI; Horne & Zimmer-Gembeck, 2006) were used to assess women’s feelings of sexual entitlement to sexual pleasure for themselves and their partner. The two subscales are: Sense of entitlement to sexual pleasure from self and sense of entitlement to sexual pleasure from partner. Sexual entitlement refers to women’s perceived ability to receive sexual pleasure through masturbation or advocating for themselves within their relationships. The measure was originally normed on women

between the ages of 16 to 22, but it has been used with women 22 to 30 years old (Bowman, 2014). There were 7 items measuring feelings of entitlement for pleasure from oneself or one's partner. These include, "It is okay for me to meet my own sexual needs through self-masturbation" and "I would expect a sexual partner to be responsive to my sexual needs and feelings." The women were asked to indicate their agreement on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The higher scores indicate more feelings of entitlement. The two subscales were combined for this study and previous studies. The Cronbach's alpha for a previous study was .81 (Bowman, 2014) and .73 for the current study.

Reasons for Masturbation (RfM). There is currently no scale that has been developed to assess women's reasons for masturbating. Therefore, the researcher used questions developed in a previous study (Bowman, 2014) and did not adapt the measure in any way. Participants were given the following prompt and asked to answer the following questions: "We know that people masturbate for different reasons at different times. Please indicate how often each of the following is a reason why you masturbate." The participants were given a list of potential reasons they masturbate and indicated their responses on a 5-point rating scale ranging from 1 (never) to 5 (always). Some of the potential answers included: orgasm, sexual stimulation, to keep me sexually satisfied when my partner is not available, exploring/learning/understanding my body, for a boost of energy, to relieve tension/to relax/for a release, to fall asleep, to feel in control, anger, horniness, because I like to, to avoid partnered sex, to learn more about my own pleasure, because sex with my partner leaves me unsatisfied, and boredom. Through exploratory factor analysis, Bowman (2014) identified five subscales: sexual pleasure (28.07% of

variance), learning about body/pleasure (10.46%), release (6.68%), substitute for partnered sex (5.95%), and sexual dissatisfaction (8.79%). These five factors accounted for 59.94% of the variance (Bowman, 2014). A similar questionnaire was used in additional studies (Ramanathan et al., 2014) but since this is the second time this measure will be used, there is no other validity evidence for this measure. The Cronbach's alpha for the current study was .75 for positive reasons for masturbating (subscales: sexual pleasure, learning about their body, and release) and an alpha of .41 for compensatory reasons for masturbating (subscale: substitute for partnered sex and sexual dissatisfaction). The reliability analysis was tested for possible removal of an item to improve alpha but none was identified. The implications for the low alpha for compensatory reasons for masturbating are discussed in the limitations section.

New Sexual Satisfaction Scale – Short Version (NSSS - S). The New Sexual Satisfaction Scale – Short Version (NSSS – S; Stulhofer et al., 2010) was used to measure women's sexual satisfaction within their relationships. The NSSS-S is an updated version of the Sexual Satisfaction Scale. This measure incorporates sexual satisfaction from the intrapersonal level and interpersonal lens. Some examples of the intrapersonal questions included the following: "The quality of my orgasm" and "My mood after sexual activity." Additionally, some examples of interpersonal sexual satisfaction include: "My partner's sexual creativity" and "The balance between what I give and receive in sex." The shorter version of the NSSS has 12 items and participants indicated their agreement on a 5-point rating scale ranging from 1 (not at all satisfied) to 5 (extremely satisfied). The scores were calculated additively with higher scores indicating a greater sexual satisfaction. The alpha ranges from .90 to .93 for samples of

students and adult community members (Stulhofer et al., 2011; Mark et al., 2014). The Cronbach's alpha for the current study was .88.

Additionally, NSSS-S had a positive relationships with life satisfaction, relationship intimacy, and sexual communication (Stulhofer et al., 2011). Additionally, a single item question was added by the researcher that asked, "Over the past two months, how sexually satisfied have you been with your partner?" This item was incorporated into the other items and has been used in previous research as a single item measure (Mark et al., 2014). The scale was the same as the previous questions with participants indicating their agreement on a 5-point Likert scale ranging from 1 (Very dissatisfied) to 5 (Very satisfied). The internal consistency for the single item measure through test-retest ranged from alpha .55 to .68 for both men and women but was higher for just men or just women, alpha equals .89 for men and .83 for just women (Mark et al., 2014).

Feelings about Masturbation (FaM). Similar to the Reasons for Masturbating section, there is no validated measure to date that addresses women's attitudes about masturbating. This study once again used the questions developed by Bowman (2014) to address women's feelings about masturbating. Her questions were developed through previous research and theory (Hite, 1976; Laumann et al., 1994; Tiefer, 1996) and sexual expert opinions. The researcher chose not to use the Negative Attitudes Toward Masturbation measure (Mosher, 1979) since the results would be confirmatory and potentially not representative of more neutral or positive attitudes of participants. The participants were asked, "How does the fact that you masturbate make you feel?" They were given a set of potential responses and asked to indicate how frequently they felt each response on a 5-point Likert scale ranging from 1 (never) to 5 (always). The

potential responses included the following: powerful, guilty, gross, ashamed, strong, sexy, disgusted, independent, satisfied, afraid of getting caught (by roommate, parent, friend, partner), afraid of being judged by G/d (or another higher power), selfish because I'm taking the ability to provide pleasure away from my partner, and selfish because I'm taking time to spend on myself. Additionally, through exploratory factor analysis, the researcher identified three factors that explain 65.08% of the total variance of the variables (Bowman, 2014). These factors are: shame (36.68% of variance), sexual empowerment (20.30%), and fear of selfishness (8.09%). This is the second study to use this measure and there have been no other validity or reliability measures to report. The alpha was .85 for the sexual empowerment subscale (positive attitudes about masturbating) and an alpha of .87 for the shame and selfish subscale (negative attitudes about masturbating) also had an alpha = .87.

Relationship Satisfaction Scale. The Relationship Satisfaction Scale (RAS; Hendrick, 1988), is a measure used to assess the quality of a romantic relationship. The measure has 7 items on a 5-point rating scale ranging from 1 (low satisfaction) to 5 (high satisfaction). Some example items included: "How well does your partner meet your needs?" and "In general, how satisfied are you with your relationship?" The scores were calculated by averaging all item responses and a higher score indicated higher relationship satisfaction. The RAS was slightly changed from Hendrick's original form to include all romantic relationships and not just married individuals by switching the word "marriage" to "relationship." The measure had internal consistency and convergent validity in multiple samples (Hendrick, 1988; Hendrick et al., 1998; Renshaw et al., 201; Vaughn

and Matyastick Baier, 1999). The alpha was .86 in a previous study and .79 in the current study (Hendrick, 1988).

Dyadic Sexual Communication Scale. The Dyadic Sexual Communication Scale (DSCS; Catania, 1998) is a measure used to quantify sexual communication between romantic partners. The DSCS is a 13-item measure that was scored on a 6-point rating style scale ranging from 1 (disagree strongly) to 6 (agree strongly). The scores ranged from 13 to 65 with higher scores indicating more positive sexual communication. An example of the items included, “My partner has no difficulty in talking to me about her or his sexual feelings and desires” and “Talking about sex is a satisfying experience for both of us.” This measure has an alpha range of .81 to .92 in several studies Catania et al., 1990; Valvano, 2018). The alpha for the current study was .86 for the Dyadic Sexual Communication Scale. Additionally, three items were added to specifically address sexual communication about masturbation. They were used on the same 6-point rating scale. The items include: “I talk to my partner about my masturbating habits,” “I enjoy talking to my partner about my masturbating habits,” “I feel closer to my partner when we discuss our individual masturbating habits.” These added items had an alpha of .92 and the alpha for the scale and the added items combined was .88.

Masturbating Behavior. Masturbating behavior was assessed through two items that addressed pornography use and sex toy use. Sex toy use was defined as any product (homemade or store bought) designed to be used for sexual pleasure. Additionally, the participants were asked to indicate their use of sex toys without their partners present. The item stated, “During the past 12 months, how often did you use any sex toys to masturbate?” Responses ranged from 1 to 6 (1= none, 2= once a month or less, 3 = 2 or

3 days a month, 4 = 1 or 2 days a week, 5 = 3 to 5 days a week, 6 = every day or almost every day). This measure was adopted from previous pornography use research (Nelson et al., 2010). Additionally, pornography use was assessed by a frequently used single item measure (Nelson et al., 2010), which asked, “During the past 12 months, how often did you view pornographic materials (such as magazines, movies, and/or Internet sites)?” Responses ranged from 1 to 6 (1= none, 2= once a month or less, 3 = 2 or 3 days a month, 4 = 1 or 2 days a week, 5 = 3 to 5 days a week, 6 = every day or almost every day).

Commitment Uncertainty – Short Scale. The Commitment Uncertainty – Short Scale (CUSS; Stanley & Rhoades, 2011) is a self-report measure that assesses the degree of commitment uncertainty a participant experiences in their relationship. The concept of commitment uncertainty is understood as the fluctuating sense of couple identity and shifting feelings in the belief the relationship will continue (Owen et al., 2014). Within the CUSS, there are two elements of commitment uncertainty being addressed: personal uncertainty and perceptions of their partner’s uncertainty. For the purposes of this study, only the questions on personal uncertainty were administered. The five items included a general question of commitment, “How committed are you to this relationship?” This question was asked on a 7-point rating style scale ranging from 1 (not at all committed) to 7 (very committed). Additionally, the other four questions are, “I am unsure how committed I really am to the future of this relationship,” “My commitment to my partner is a day-to-day thing at this point,” “My level of commitment in this relationship has been wavering,” and “My commitment to this relationship goes up and down a lot.” These remaining questions are rated on a 6-point Likert scale ranging from 1 (strongly agree) to

7 (strongly disagree). The internal consistency ranges from .80 to .93 in a community based adult sample (Shuck et al., 2014). Additionally, for self-uncertainty, the internal consistency ranged from .93 -.97 in a sample of adults (mean age of 36.57; Owen et al., 2014) and an alpha of .82 in a sample of young adults (Quirk et al., 2016). The Cronbach's alpha was .81 for the current study.

Daily Hassle. Women's daily hassles outside of the relationship will be measured through the 8-item chronic and acute extradyadic stress subscale that is taken from the 30-item Multidimensional Stress Questionnaire for Couples (MSQ-C; Bodenmann et al., 2007). The MSQ-C was adapted from the original Hassles Scale (Kanner et al., 1981). Participants were asked to rate how stressful daily situations are outside of the couple's relationship over the past year (chronic) and within the past seven days (acute). The 8 items are rated on a 4-point rating scale ranging from 1 (not at all) to 4 (highly stressful). The measure states, "How stressful/straining are the following situations outside of your relationship? This concerns stress which isn't connected to your partner." The items include: job/education, social contacts, free time, children, family of origin, living situation, finances, and daily hassles. The summed scores of the eight items indicate the participant's higher ratings of stress. Bodenmann and colleagues (2007) found that all of the items loaded on one factor, external dyadic stress, and internal consistency and the alpha was .86. This subscale has been used in previous studies (Bodenmann et al., 2007; Falconier et al., 2015) to measure extradyadic stress from daily hassles. The Cronbach's alpha was .83 for the current study.

Procedures

The researcher recruited participants through snowball sampling via social networking websites (Facebook), email list serves, and online forums (Reddit and Craigslist). The survey was posted to the researcher's Facebook page as well as the pages of friends, family, and coworkers to increase the chances of a wider representation of women. More specifically, the survey was posted to six sub-Reddit sites on Reddit which are: Reddit/Relationships, Reddit/Sex, Reddit/Sexualhealth, Reddit/Womenshealth, Reddit/Samplesize, and Reddit/AskWomen. Additionally, the survey was posted on the American Association of Sexuality Educators, Counselors, and Therapists (AASECT) listserv, the APA Division 17 listserv, the APA graduate student listserv, and on Craigslist. A copy of the recruitment letter that was sent to different listserv is in Appendix B, the recruitment material for Facebook is under Appendix C, and the recruitment for Reddit, Craigslist, AASECT, APA, and Division 17 are under Appendix D. Additionally, the survey was posted to several listervs around the country which include: the University of Denver Graduate School of Counseling Psychology listserv, DU's Graduate School of Counseling Psychology Social Justice listserve, DU's Graduate School of Business listservs, DU's Graduate School of Social Work listserve, DU's Graduate School of Professional Psychology listserve, the University of Pennsylvania Graduate School of Education listserv, and Bard University Graduate School of Business listserv.

Qualtrics was used to create the online questionnaire in order to maximize participants' privacy and access to the survey. The survey was completely anonymous and no responses were linked to any specific participants and the results are analyzed for

significant trends. The participants were offered a monetary incentive for participating in the study which they could add their email address at the end of the survey and be entered to win one of four \$20 Amazon gift cards. The participant's email registration was not linked to their survey responses to ensure their confidentiality was maintained.

Participants were asked to complete the online consent form and answer eligibility questions such as gender, age, and relationship status. Due to the potential sensitive nature of the content, participants were encouraged to complete the survey in a private location at their leisure. The study was approved by the University of Denver's Institutional Review Board (1358503-1).

Results

Hypothesis One

Women who endorse more positive attitudes about masturbating (subscale: sexual empowerment) also endorse higher relationship (H1a) and sexual satisfaction (H1b), after controlling for commitment uncertainty and daily hassles.

A multiple linear regression was conducted to examine the relationship between positive attitudes about masturbating and relational satisfaction after controlling for commitment uncertainty and daily hassles. Table 4 summarizes the analysis results. The regression model for only the control variables produced $R^2 = .39$, $F(2,391) = 127.51$, $p < .001$. The regression model for all three predictors was $R^2 = .39$, $F(1,390) = 1.28$, R^2 Change = .002, $p = .26$. Therefore, while positive attitudes about masturbating explained none of the variance for relational satisfaction, the control variables accounted for almost 40% of the variance for relational satisfaction. The partial correlation for positive attitude about masturbating and relational satisfaction was not significant ($r = .06$) after controlling for daily hassles and commitment uncertainty.

A second multiple linear regression was conducted to examine the relationship between positive attitudes about masturbating and sexual satisfaction after controlling for commitment uncertainty and daily hassles. The regression model for only the controls produced $R^2 = .11$, $F(2,391) = 24.82$, $p < .001$. These results indicated that the controls (daily hassles and commitment uncertainty) were significantly predicting the outcome

(sexual satisfaction). The regression model for all three predictors was $R^2 = .18$, $F(1,390) = 37.01$, R^2 Change = $.07$, $p < .001$. Therefore, 11% of the variance for sexual satisfaction was explained through the control variables and 7 percent of the variance was explained by positive attitudes. The partial score for positive attitude about masturbating and sexual satisfaction was significant ($\beta = .29$, $p < .001$) after controlling for daily hassles and commitment uncertainty.

In conclusion, the results of the analysis did not support the hypothesis that women who endorse positive attitudes about masturbating would also endorse relational satisfaction, after controlling for commitment uncertainty and daily hassles. In other words, women who reported positive attitudes about masturbating did not also endorse relational satisfaction after controlling for relational factors. However, the control variables accounted for a significant amount of the variance in relational satisfaction. Although, the results of the analysis did support the hypothesis that women who endorse positive attitudes about masturbating would also endorse sexual satisfaction, after controlling for commitment uncertainty and daily hassles.

Hypothesis Two:

Women's sexual communication and feelings of sexual self-love (female genital self-image scale) will moderate the relationship between negative masturbation attitudes (combined subscales: 2 and 3: shame and fear of selfishness) and higher relational (H2a) and sexual satisfaction (H2b). I ran two hierarchical regression analyses to test for moderation to determine if feelings of sexual self-love and sexual communication moderated the relationship between negative feelings about masturbating and higher relational and sexual satisfaction. Results of the moderated

hierarchical multiple regressions are presented in Table 5. I centered the independent variables and moderator for the analysis.

For the first regression, I tested relational satisfaction as my outcome and entered my predictors, negative feelings about masturbating, sexual communication, sexual self-love in Model 1, which accounted for 19% of relational satisfaction. Model 1 produced the following results $R^2 = 0.19$, $F(3,392)$ F Change = 32.74, $p < .001$. Therefore, there was a significant main effect occurring for the predictors and relational satisfaction. This main effect was due to the significant association between sexual communication and relational satisfaction. For every unit increase in sexual communication, there was a .38 increase in relational satisfaction ($b = .38$, $t = 9.5$; $p < .01$) while holding all other variables constant. There was no significant association between relational satisfaction and the other variables, negative feelings about masturbating and feelings of sexual self-love.

However, after adding the interaction variables to Model 2, the interaction variables did not contribute a significant amount of variance and produced $R^2 = 0.21$, $F(2,390)$ F Change = 1.67, R^2 Change = .007, $p = .19$, meaning that .7 percent of the variance in communication and sexual self-love can be explained by the final model. There was no significant interaction effect between negative feelings about masturbating and sexual communication ($b = .01$, $t = .08$, $p = .93$) or feelings of sexual self-love ($b = .22$, $t = 1.8$, $p = .07$). Overall, 19% of the variance in relational satisfaction was explained by negative feelings about masturbating, sexual communication, and sexual self-love but the added interactions did not significantly add to the prediction.

My second regression analyzed sexual satisfaction as my outcome and I entered negative feelings about masturbating, sexual communication, and sexual self-love in Model 1, which accounted for 45% of the variance in sexual satisfaction. The results for Model 1 were the following, $R^2 = .45$, $F(3,392) = 106.95$, $p < .001$. There were two significant associations, which were between sexual communication and sexual satisfaction ($b = .51$, $t = 16$, $p < .001$) in addition to feelings of sexual self-love and sexual satisfaction ($b = .19$, $t = 3.4$, $p < .001$). For each unit increase in sexual communication, there was a .5 increase in sexual satisfaction. For each additional unit change in feelings of sexual self-love, there was a .19 increase in sexual satisfaction while holding all other variables constant. However, there was no significant association between negative feelings about masturbating and sexual satisfaction.

Adding the interaction variables into Model 2 explained no additional significant variance in sexual satisfaction. The total variance explained by the model was $R^2 = .45$, $F(2,390) \text{ Change} = .69$, $R \text{ Change} = .002$, $p = .50$, meaning that the interaction variables accounted for .2 percent in the final model. Finally, there was no significant interaction effect between negative feelings about masturbating and sexual communication ($b = -.03$, $t = -.64$, $p = .52$) or feelings of sexual self-love ($b = .11$, $t = 1.1$, $p = .28$).

Overall, 45% of the variance for sexual satisfaction was explained by negative feelings about masturbating, sexual communication and sexual self-love but the added interactions did not significantly add to the prediction. In conclusion, the results from the analysis did not support the hypothesis. Women's sexual communication and feelings of sexual self-love did not significantly moderate the relationship between negative feelings about masturbating and higher relational and sexual satisfaction.

Hypothesis Three:

Women who report higher sexual entitlement (combined subscales 1 and 2: sense of entitlement to sexual pleasure from masturbating and partner) will moderate the relationship between more positive attitudes about masturbating (subscale: sexual empowerment) and higher relational (H3a) and sexual satisfaction (H3b). I ran two regression analyses to test for moderation to determine if sexual entitlement moderated the relationship between higher positive feelings about masturbating and relational and sexual satisfaction. Results of the hierarchical multiple regressions are presented in Table 6. Before beginning analysis, I centered the independent variable and moderator for the analysis.

For the first regression, I tested relational satisfaction as my outcome and entered positive feelings about masturbating and sexual entitlement in Model 1, which accounted for 1 percent of the variance for relational satisfaction. The results from Model 1 are the following, $R^2 = .01$, $F(2,393) = .04$, $p = .96$. There was no significant association between entitlement and relational satisfaction as well as positive feelings about masturbating and relational satisfaction. Additionally, after adding the interaction variable to Model 2, it explained .02 percent of the variance in relational satisfaction. The total variance explained by the incremental model was $R^2 = .01$, $F(1,392) = .720$, $R \text{ Change} = .002$, $p = .39$, meaning that 1 percent of the variance can be explained by the final model. As expected, there was no significant interaction effect ($b = .85$, $t = .85$, $p = .39$). Overall, there was no significant direct or interaction effect occurring with relational satisfaction as the outcome.

For my second regression, I analyzed sexual satisfaction as my outcome and entered positive feelings about masturbating and feelings of sexual entitlement in Model 1, which accounted for 9 percent of the variance in sexual satisfaction. Model 1 produced the following results, $R^2 = .09$, $F(2,393) = 19.62$, $p < .001$. There was a significant association between feelings of sexual entitlement and sexual satisfaction ($b = .34$, $t = 3.68$, $p < .001$) as well as positive feelings about masturbating and sexual satisfaction ($b = .13$, $t = 3.37$, $p < .001$). For every unit increase in feelings of entitlement, there was a .34 increase in sexual satisfaction while holding all other variables constant. For each additional unit change in positive feelings about masturbating, there was a .13 increase in sexual satisfaction while holding all other variables constant.

Adding the interaction to Model 2 explained no additional significant variance in sexual satisfaction. The total variance explained by the incremental model was $R^2 = .09$, $F(1,392) = .46$, $R \text{ Change} = .001$, $p = .49$, meaning that .1 percent of the variance in feelings of entitlement and positive feelings about masturbating can be explained by the final model. Furthermore, there was no significant interaction effect between sexual satisfaction and positive feelings about masturbating with entitlement as the moderator ($b = .06$, $t = .67$, $p = .49$). Overall, 9 percent of the variance for sexual satisfaction was explained by feelings of sexual entitlement and positive feelings about masturbating but the added interaction did not significantly add to the prediction. In conclusion, the results from the analysis did not support the hypothesis. Women's reports of feelings of sexual entitlement did not moderate the association between higher positive feelings about masturbating and women's reports of higher relational and sexual satisfaction.

Hypothesis Four:

Women who report sexual satisfaction (H4a) and relational satisfaction (H4b) will also report more complimentary reasons for masturbating (combined subscales 1-3: sexual pleasure, learning about body/pleasure, and release) as opposed to compensatory reasons (combined subscales 4 and 5: substitute for partnered sex and sexual dissatisfaction). A linear regression was conducted to examine the association between complimentary and compensatory reasons for masturbating and relational satisfaction. Table 7 summarizes the analysis results.

The regression model for both complimentary and compensatory reasons for masturbating produced $R^2 = .08$, $F(2,393) = 18.75$, $p < .001$. These results indicate that complimentary and compensatory reasons for masturbating were significantly predicting relational satisfaction and accounted for 8 percent of the variance in relational satisfaction, although there was only a significant association between compensatory reasons for masturbating and relational satisfaction ($b = -.45$, $t = -5.6$, $p < .001$) and there was no significant association between complimentary reasons for masturbating and relational satisfaction ($b = .03$, $t = .433$, $p = .66$). For each unit increase in compensatory reasons for masturbating, there was a .45 decrease in reports of relational satisfaction.

A second linear regression was conducted to examine the association between the outcome, sexual satisfaction, and the predictors, complimentary and compensatory reasons for masturbating. The regression model for complimentary and compensatory reasons for masturbating produced $R^2 = .11$, $F(2,393) = 25.07$, $p < .001$. These results indicate that complimentary and compensatory reasons for masturbating were significantly predicting sexual satisfaction and accounting for 11% of the variance in

sexual satisfaction. There was a significant association between sexual satisfaction and both predictors, complimentary reasons for masturbating ($b = .34, t = 5.6, p < .001$) and compensatory reasons for masturbating ($b = -.49, t = -6.4, p < .001$). For each unit increase in complimentary reasons for masturbating, there was a .34 increase in reports of sexual satisfaction. Additionally, for each unit increase in compensatory reasons for masturbating, there was a .49 decrease in reports of sexual satisfaction).

In conclusion, the results of the analysis did not support the hypothesis that women who report more complimentary reasons for masturbating would also endorse more relational satisfaction. There was a significant relationship between woman who endorsed compensatory reasons for masturbating and *less* relational satisfaction. Additionally, the results of the analysis supported the hypothesis that women who reported more complimentary reasons for masturbating also reported higher sexual satisfaction and women who reported more compensatory reasons for masturbating reported less sexual satisfaction.

Hypothesis Five:

Women who endorse more sexual behavior (use of sex toys and sexually explicit material) will also endorse higher sexual (H5a) and relational satisfaction (H5b), as moderated by feelings of sexual entitlement (combined subscales 1-2: sense of entitlement to sexual pleasure through masturbating and partner). I ran two hierarchical regression analyses to test for moderation to determine if sexual entitlement moderated the relationship between the predictors, porn and sex toy use, and the outcomes, relational and sexual satisfaction. Results of the hierarchical multiple regressions are presented in Table 8. I centered the independent variables and moderator for the analysis.

For the first regression, I tested relational satisfaction as my outcome and entered feelings of sexual entitlement, porn use, and sex toy use in Model 1, which accounted for 2 percent of the variance in relational satisfaction. The results from Model 1 were the following, $R^2 = .02$, $F(3,391) = 4.12$, $p < .01$. Additionally, there was a significant association between porn use and relational satisfaction ($b = -.09$, $t = -2.9$, $p < .01$). For each additional unit change in porn use, there was a .08 decrease in relational satisfaction while holding all other variables constant. However, there was no significant association between relational satisfaction and the other two predictors, sex toy use ($b = -.01$, $t = -.41$, $p = .68$) and feelings of sexual entitlement ($b = .02$, $t = .20$, $p = .84$).

However, after adding the interaction variables to Model 2, it explained no additional significant variance to the prediction. The total variance explained by the model was $R^2 = .02$, $F(2,389) = .42$, $R \text{ Change} = .002$, $p = .65$, meaning that .2 percent of the variance can be explained by the final model. Furthermore, there was no significant interaction effect between feelings of sexual entitlement and sex toy use ($b = .064$, $t = .84$, $p = .39$) and feelings of sexual entitlement and porn use ($b = -.002$, $t = -.03$, $p = .97$). Overall, 2 percent of the variance in relational satisfaction was explained by the predictors but the added interactions did not significantly add to the prediction.

My second regression analyzed sexual satisfaction as my outcome and I entered feelings of sexual entitlement, sex toy use, and porn use in Model 1, which accounted for 6 percent of the variance in sexual satisfaction. The results from Model 1 are the following, $R^2 = .06$, $F(3,391) = 9.24$, $p < .001$. There was one significant association, which was between feelings of sexual entitlement and sexual satisfaction ($b = .47$, $t = 5.2$, $p < .001$). For each additional unit change in feelings of entitlement, there was a .47

increase in sexual satisfaction while holding all other variables constant. However, there was no significant association between porn use and sexual satisfaction ($b = -.02$, $t = -.58$, $p = .56$) and no significant relationship between sex toy use and sexual satisfaction ($b = -.01$, $t = -.41$, $p = .68$).

Adding the interaction variables to Model 2 explained no additional significant variance in sexual satisfaction. The total variance explained by the model was $R^2 = .05$, $F(2,389) = .032$, $R \text{ Change} = .000$, $p = .97$, meaning that no variance was explained in the final model by the moderators. There was no significant interaction effect between sexual satisfaction and sex toy use ($b = .01$, $t = .11$, $p = .91$) and porn use ($b = -.02$, $t = -.25$, $p = .80$) with entitlement as the moderator. Overall, 6 percent of the variance in sexual satisfaction was explained by the predictors but the interactions did not significantly add to the prediction. In conclusion, the results from the analysis did not support the hypothesis that women who endorse more sexual behavior (use of sex toys and sexually explicit material) would also endorse higher sexual and relational satisfaction as moderated by feelings of sexual entitlement.

Discussion

The purpose of this study was to study the motivation for women to masturbate while in a relationship and how masturbating in a relationship impacts relational and sexual satisfaction. This would be the first study to specifically address early adult women (25-35 years old) in relationships that assesses the attitudes and behaviors of masturbation on relational and sexual satisfaction. For this study, masturbating is defined as a sexual act that occurs without a partner present, with or without an orgasm achieved. Within this study, 89.1% of participants endorsed masturbating in the past three months and 64.6% endorsed masturbating within the past week. This is also consistent with a previous study that asked these same questions (Bowman, 2014). Moreover, 57.1% of participants endorsed agreeing or strongly agreeing that “masturbating has improved my pleasure in my relationship,” which is slightly lower than other studies reported participant agreement closer to 69.4% (Bowman, 2014).

The prevalence of masturbation for women varied based on age, race/ethnicity, and education level (Das, 2007; Herbenick et al., 2010a; Kraus, 2017; Laumann, et al., 1994). The age groups with the highest overall rates of masturbation are women aged 25 – 29 years old, which fits within our demographics of women aged 25 to 35 years old. Additionally, masturbating prevalence is varied based on racial/ethnic identities. Black and Asian women have reported lower annual rates of masturbation than non-Hispanic

White adults (Das, 2007). Overall, women with a college degree or higher reported the highest frequency of masturbating (Kraus, 2017).

Complementary versus Compensatory

Much of the previous research on this topic has been divided due to methodological and theoretical differences. Much of the research has framed the investigations from a compensatory model (Arafat & Cotton, 1974; Greenberg & Archambault, 1973; Laumann et al., 1994) as opposed to a complementary model (Bowman, 2014). The compensatory model holds that masturbation and paired sexual activity are inversely related. In other words, masturbation is a sexual outlet used more frequently when paired sexual activity is unavailable due to a lack of partner or the partner's inability to satisfy or engage in sexual activity as frequently as the partner desires. In comparison, the complementary model describes masturbation as working in relationship to paired sexual activity rather than replacing it. In other words, masturbation is argued to enhance the sex life of partnered adults (Laumann et al., 1994; Pinkerton et al., 2002; Regnerus et al., 2017). The current study was shaped from a complementary framework for understanding women's reasons for masturbating and how it affects their relational and sexual satisfaction. It is first important to describe if the findings of this research did in fact align with the complimentary framework.

As predicted, women who reported more complimentary reasons for masturbating also reported higher sexual satisfaction and women who reported more compensatory reasons for masturbating reported less sexual satisfaction. The results indicated that complimentary and compensatory reasons for masturbating was significantly predicting sexual satisfaction and accounting for 11% of the variance in sexual satisfaction. This is

consistent with previous research that assesses women's reasons for masturbating from a complimentary framework opposed to a compensatory framework (Bowman, 2014; Carvalheira & Leal, 2013; Fahs & Frank, 2014). These results continue to endorse the understanding that women masturbate for a variety of reasons and unavailability of a partner or being sexually unsatisfied is not the only reasons women masturbate (Bowman, 2014; Coleman, 2002; Dekker & Schmidt, 2002; Gerressu et al., 2008; Kontula & Haavio-Mannila, 2003). These results indicate that it is not whether women masturbate in their relationship that dictates sexual satisfaction; it is the reasons women masturbate that indicate sexual satisfaction.

However, for relational satisfaction, women who reported compensatory reasons for masturbating also reported less relational satisfaction and there was no association between complimentary reasons for masturbating and relational satisfaction. Overall, compensatory and complimentary reasons for masturbating account for 8 percent of the variance in relational satisfaction. The literature on masturbating and relational satisfaction is less robust than the literature on masturbating and sexual satisfaction. These findings support previous literature that support the compensatory framework (Zamboni & Crawford, 2002). Therefore, women's reasons for masturbating are associated with relational satisfaction if those reasons are compensatory. However, if those reasons are complimentary, they have no significant impact on relational satisfaction.

Sexual Satisfaction as Outcome

While there were no significant interaction effects, there were several important main effects that address how masturbating in a relationship is associated with sexual

satisfaction. Sexual satisfaction for women who masturbate in relationship were directly tied to women's higher reports of positive attitudes about masturbating, sexual communication, sexual self-love, and feelings of sexual entitlement. First, women who endorse positive attitudes about masturbating would also endorse sexual satisfaction, after controlling for commitment uncertainty and daily hassles. This is consistent with previous research that has found a positive relationship between female masturbation and better sexual functioning overall (Herbenick et al., 2009; Hurlbert & Whittaker, 1991). Specifically, previous research has found that women who endorse masturbation, compared to those who denied masturbating, reported higher sexual satisfaction (Hurlbert & Whittaker, 1991). These results are important because they contribute to the larger conversation on how lack of stigma around masturbating can positively affect sexual satisfaction. This findings are important because they confirms what recent research has determined that women's attitudes about masturbating in a relationship may be shifting as societal stigma and practices may be shifting (Marks & Wosick, 2017).

Furthermore, while it is unclear why women's sexual communication and feelings of sexual self-love did not significantly moderate the relationship between negative masturbation attitudes and sexual satisfaction, 45% of the variance for sexual satisfaction was explained from sexual communication and sexual self-love. These results are consistent with previous research that has consistently reported the connection between sexual satisfaction and sexual communication (Byers, 2011; Haavio-Mannila & Kontula, 1997; Velten & Margraf, 2017). Sexual communication is the willingness of partners to express their sexual desires and concerns openly. While there is plenty of research supporting sexual communication positively affecting sexual satisfaction, this study

specifically addresses how sexual communication about masturbation can positively impact sexual satisfaction. This finding contributes to the larger conversation that women should be encouraged to discuss their solo masturbation with their partner's as it positively contributes to reports of sexual satisfaction. Additionally, the sexual self-love variable was used to assess women's feelings about their genitalia. This study confirmed previous research that noted women who feel positively about their genitalia would also endorse higher sexual satisfaction (Bowman, 2014). Similar to literature on positive female body image, women's positive feelings about their genitalia may allow them to feel more sexually confident which contributes to their higher reports of sexual satisfaction.

Additionally, women's feeling of sexual entitlement had a positive association with reports of sexual satisfaction. Overall, 9 percent of the variance for sexual satisfaction was explained by feelings of sexual entitlement and positive feelings about masturbating. Entitlement refers to how a woman might feel if her sexual needs were not met by her partner and a woman's motivations to ask for what she wants sexually from a partner. Women who feel more sexually empowered to ask for what they want are more likely to receive it (Horne & Zimmer-Gembeck, 2005) could explain the relationship between sexual satisfaction and women's feelings of sexual entitlement. The implications for this finding in couples counseling is that women should be encouraged to discuss how they could feel more entitlement to more sexual satisfaction and how to better communicate their wants to their partner to increase sexual satisfaction.

Relational Satisfaction as Outcome

Additionally, there were some important findings for women who masturbated in their relationship and how it relates to their relational satisfaction. While it is unclear why there were no significant interaction effects, there were two significant main effect findings for relational satisfaction. Firstly, 19% of the variance for relational satisfaction was explained by negative feelings about masturbating, sexual self-love, and sexual communication. Most of this variance was explained through the significant positive association between sexual communication and relational satisfaction. Similar to sexual communication and sexual satisfaction, the association between sexual communication and relational satisfaction has been well supported in the literature (Haavio-Mannila & Kontula, 1997; MacNeil & Byers, 2009). Sexual communication is the willingness of partners to express their sexual desires and concerns openly. Women who feel comfortable expressing their sexual needs and wants to their partner seem to be emotionally connected to their partners (Hurlbert et al., 1993). Sexual self-disclosures typically increase intimacy (Cupach & Metts, 1991; MacNeil & Byers, 2005, 2009), which positively affects sexual and relational satisfaction. Therefore, this finding positively contributes to the literature on sexual communication that discussing masturbation with a partner helps to increase reports of relational satisfaction for couples.

Furthermore, it is important to note that there was a significant association between the control variables, commitment uncertainty and daily hassles with relational satisfaction. While positive attitudes about masturbating explained none of the variance for relational satisfaction, the control variables accounted for almost 40% of the variance for relational satisfaction. Commitment uncertainty includes wavering, fleeting, and

unpredictable patterns of behavior, which impact couple identity and long-term vision of the relationship (Owen et al., 2014). Additionally, daily hassles include external relationship factors such as job, social relationships, self-care, children, family of origin, living situation, and finances. These contextual factors were used to account for other variables that could be impacting women's reasons for masturbating in relationships and overall relational satisfaction. Therefore, while the control variables were not the main focus of the study, the findings support previous research. The association with lower relational satisfaction and commitment uncertainty (Owen et al., 2014) and daily hassles (Buck & Neff, 2012; Falconier et al., 2015; Story & Bradbury, 2004) has been documented in previous research. Therefore, this research contributes to the larger dialogue on how external relational factors contribute to overall relational satisfaction.

In addition, there were some nonsignificant findings related to relational satisfaction as the outcome that are important to explore. There was no significant association between women's positive or negative attitudes about masturbating and their reports of relational satisfaction. This is contrary to previous research that has noted that negative attitudes about masturbating could impact reports of negative relational satisfaction due to internalized feelings of stigma (Herbenick et al., 2011; Fahs & Frank, 2014). However, recent research from the complimentary framework has found a positive association between these two variables (Bowman, 2014). This study notes that women's positive and negative attitudes about masturbating do not impact relational satisfaction. This is important to note so clinicians can be aware that female client's positive or negative attitudes about their masturbating may not impact their relational satisfaction. In

other words, women's feelings of shame, guilt, or empowerment about masturbating do not contribute to relational satisfaction, which is contrary to previous research.

Overall, there were three factors that impacted relational satisfaction which were compensatory reasons for masturbating (negative correlation), sexual communication (positive correlation), and use of sexually explicit material (negative correlation). However, women's positive or negative attitudes about masturbating, feelings of sexual entitlement, feelings of sexual self-love, sex toy use, and complimentary reasons for masturbating did not have an association with relational satisfaction.

Sexual Behavior Findings

Finally, there were some important findings from how sexual behavior, use of sexually explicit material and sex toy use, was associated with relational and sexual satisfaction. Overall, 33.1% of the sample denied ever using a sex toy and 22.7% denied ever using sexually explicit material. Although, this means that the majority of the participants did endorse use of both these behaviors. Specifically, 18.9% reported using a sex toy 1 or 2 days a week and 18.2% of the women reported using a sex toy 2 or 3 days a month. These numbers are consistent with other research on prevalence rates of sex toy use (Lindley et al., 2003; Califia, 1979). For sexually explicit material use, 25% of the participants reported using sexually explicit material once a month or less. The prevalence rates on female use of sexually explicit material are hard to compare to previous studies since this study focused on a wider range of material compared to other studies that focused solely on porn use (Hald, 2006; Buzzell, 2005).

It is first important to note that there were no significant association between women's use of sex toys on their reports of sexual satisfaction or relational satisfaction.

In other words, women's use of sex toys does not seem to be impacting their sexual or relational satisfaction. This is contrary to research that has found sex toy use to have both positive and negative effects of sexual and relational satisfaction (Herbenick et al., 2011). However, this finding is important in that women's use of sex toys may have no bearing on their reports of sexual or relational satisfaction.

Additionally, women's use of sexually explicit material did not have any association with their reports of sexual satisfaction. This is contrary to previous research that the use of sexually explicit material hinders sexual and relational satisfaction (Hare et al., 2014; Lambert et al., 2012; Morgan, 2011; Peter & Valkenburg, 2006; Poulsen et al., 2013; Stack et al., 2004; Wright et al., 2014; Zillmann & Bryant, 1988) or research that states sexually explicit material helps enhance relational factors (Albright, 2008; Hald & Malamuth, 2008; Daneback et al., 2009; Grov et al., 2011). The lack of significant findings may be due to the openness of the question regarding sexually explicit material. Many previous studies only asked about porn use instead of broadening the question to refer to sexually explicit material. Since studies have noted that women use different types of sexual explicit material than men (Senn & Radtke, 1990) that the openness of sexually explicit material was able to capture a different element of this behavior for women. The implications for this finding within couples counseling are that women's use of sexually explicit material has no significant impact on their reports of sexual satisfaction. However, there was a negative correlation between sexually explicit material and relational satisfaction but this only accounted for 2 percent of the variance in relational satisfaction. Therefore, even for relational satisfaction, women's use of

sexually explicit material was not having as large an impact as some previous research was reporting.

Limitations And Future Research

While the findings from my study contribute to the larger conversation on understanding female masturbation and its relationship to relational and sexual satisfaction, there are a number of limitations that need to be discussed. Firstly, convenience and snowball sampling has many advantages and disadvantages. Some advantages include cost-effectiveness, convenience for participants, and quick gathering of information for research. The participants were able to take the survey at their convenience and in the privacy of their own home. Additionally, the researcher was able to gather the participant information quickly. The researcher was also able to gain a wide range of participants across the country through the web. As an advantage, the researcher was using a social networking site that has access to a high percentage of women between the ages of 25 and 35 (Duggan & Smith, 2013).

However, this type of sampling does create potential limitations. For example, there is privilege associated with taking online surveys. The participant has to have access to a computer and time to participate in the survey. Overall, social media is predominantly used by younger or middle aged individuals (83% 18-29 and 77% 30-49), who are female (71%), and urban (70%; Duggan & Smith, 2013). Furthermore, when specifically looking at Facebook's users demographics, most users as of 2012 are women, younger adults, and have some college education (Duggan & Brenner, 2013). Facebook users have also been shown to be more affluent (Morales, 2011). Therefore, when considering the already over representation of urban, affluent, educated women on

Facebook and the researcher's use of sending the surveys through graduate school listservs, increased the chances of an over representation of highly educated women.

The limitations due to sampling may have impacted the lack of diversity in the sample. While the current study was the only study to date to address women's masturbating habits between the ages of 25-35, the vast majority of the sample was White (81.3%), heterosexual (74.2%), and highly educated (49.5% obtaining more than a bachelor's degree). Therefore, since only 25.8% percent identified as non-heterosexual and 2.8% identified as gender nonconforming, transgender, and gender queer, the results of the study should be cautiously generalized. Due to the small sample size of these groups, it was impossible to do analysis separating women who identified as heterosexual and women who identified as other sexual orientations. However, other researchers have noted there may be a difference in how women who have sex with women may experience masturbating and relational/sexual satisfaction differently than women who have sex with men (Coleman, et al., 1983). Additionally, analysis that examines the differences between different gender identities (cisgender female, gender non-binary, transgender, and gender nonconforming) were beyond the abilities of this research based on the limited sample size.

Additionally, as with all self-report measures, this introduces selection bias into the study, even before the survey is administered. While the finding that the vast majority of women endorsed masturbating (96.1%) was consistent with previous research (Bowman, 2014; Herbenick et al., 2010a; Mark, 2011), this may be reflective of self-report limitations in sexuality research (Fenton, Johnson, et al., 2001) and may reflect a sex-positive proportion of women as opposed to women in general (Bowman 2014). It is

possible that women who are more sex-positive or more comfortable answering a survey about masturbating may be more likely to opt into a survey titled, “Sex, Love, and Masturbating.”

Additionally, the Compensatory Reasons for Masturbating subscale, which was part of the Reasons for Masturbating measure, had a low alpha (.41). There is currently no scale that has been developed to assess women’s reasons for masturbating and this study was the second study to date to use the Reasons for Masturbating measure that was previously developed by Bowman (2014) through factor analysis. There were five responses that contributed to the Compensatory Reasons for Masturbating, which included: to keep me sexually satisfied when my partner is unavailable; to avoid partnered sex; anger; because sex with my partner leaves me unsatisfied; and boredom. Attempting to remove different responses from the subscale did not improve the alpha. Therefore, the response options may not hang well together to improve the alpha. Therefore, the lack of reliability for Compensatory Reasons for Masturbating may be impacted by the seemingly different reasons for masturbating (boredom, anger, avoid partnered sex, to keep me sexually satisfied when my partner is unavailable, and sex with partner leaves the person unsatisfied). In other words, the finite list of options for reasons for masturbating may not allow inclusiveness and may miss some key compensatory reasons women masturbate. This may indicate that future research would benefit from another factor analysis that addresses women’s reason for masturbating. Finally, the correlational design does not yield information on direction of effects. Consequently, we used theory to guide our models and their interpretation. For instance, it is unclear if

those with higher sexual satisfaction would cause women to masturbate for more complimentary reasons or vice versa.

This study helped continue the framework for understanding women's masturbation habits, attitudes, and reasons for future research. Most previous research has focused on exploring specific methods women use to masturbate (Herbenick et al., 2009), psychological outcomes of masturbation (Herbenick et al., 2009; Hurlbert & Whittaker, 1991), or women's frequency of masturbation (Arafat & Cotton, 1974; Herbenick et al., 2010; Laumann et al., 1994). This study went beyond prevalence of women's masturbation and focused on women's emotional responses to masturbating in a relationship and feelings about their habit. By continuing to develop research from a complimentary framework, it allowed a more nuanced and socioculturally informed exploration of women's attitudes, behaviors, and reasons for masturbating in relationships from a sexual empowerment lens. It would be beneficial for future research to continue exploring women's reasons and attitudes about masturbating in relationships that expands about the complimentary framework. Additionally, it would be beneficial for other researchers to explore this similar study with a more diverse sample of women to better capture the lived experiences of a variety of participants.

Implications

Notwithstanding the limitations noted, this research has helped to expand the conversation on the topic of female masturbation and specifically address women's motivation to masturbate while in a relationship and the association between masturbating and relational and sexual satisfaction. Overall, not many factors impacted

women's reports of relational satisfaction. However, several factors regarding female masturbation did contribute to reports of sexual satisfaction.

The four main implications for this study regarding sexual satisfaction are the following: 1) women report more complimentary reasons for masturbating compared to compensatory, 2) women who feel positively about their masturbating also report higher sexual satisfaction, 3) women who discuss their masturbating habits with their partner also report higher sexual satisfaction. And finally, 4) sex toy use and sexually explicit material use does not impact sexual satisfaction.

The largest take away from this study is that women who reported more complimentary reasons for masturbating also reported higher sexual satisfaction and women who reported more compensatory reasons for masturbating reported less sexual satisfaction. These results continue to endorse the understanding that women masturbate for a variety of reasons and unavailability of a partner or being sexually unsatisfied is not the only reasons women masturbate. Therefore, it would be important for clinicians to know that for their female clients in a relationship, it is not whether women masturbate in their relationship that dictates sexual satisfaction; it is the reasons women masturbate that indicate sexual satisfaction. It would be important for clinicians to explore their clients' reasons for masturbating to better understand how to address the clients' concerns.

Moreover, this study reported that sexual satisfaction for women who masturbate in relationship was directly tied to women's higher reports of positive attitudes about masturbating. These results are important because they contribute to the larger conversation on how lack of stigma around masturbating can positively affect sexual satisfaction. This research confirms what recent research has determined that women's

attitudes about masturbating in a relationship may be shifting as societal stigma and practices may be shifting toward more commonly acceptable behavior. Additionally, it is important to note that women who endorsed negative attitudes about their masturbating did not have a significant association with sexual satisfaction. Therefore, clinicians should address their client's reasons and their client's attitudes about their masturbation.

Furthermore, women who reported higher sexual satisfaction also reported higher sexual communication about masturbation. This means that women who feel more comfortable discussing their sexual wants and needs in addition to their masturbating habits report higher sexual and relational satisfaction. While there is plenty of research supporting sexual communication positively impacting sexual satisfaction, this study specifically addresses how sexual communication about masturbation can positively impact sexual satisfaction. Similar to what previous research has suggested, a woman's ability to openly communicate her masturbating habits to her partner may be able to better advocate for her sexual wants and needs more effectively. Clinicians should consider the importance of addressing not only sexual communication with women struggling with relational and sexual satisfaction but also address how to better communicate masturbating experiences with their partner to enhance these aspects of their relationship.

Finally, it is important to note that there were no significant association between women's use of sex toys and sexually explicit material (including porn use) on their reports of sexual satisfaction. This is contrary to previous research that found that women who report using sex toys and sexually explicit material also report lower sexual satisfaction. This would be important for clinicians and researchers to note, as

it is contradictory from previous studies and would be important to address with female clients.

The findings of my study have implications for more than just clinical practitioners. These findings can help bring added understanding of women's masturbation habits to health professional as well as policy makers and activists. This study contributes to the larger findings on the prevalence of female masturbation and the knowledge that women are masturbating for a variety of reasons. This information would be important for family doctors, gynecologist, and nurses to incorporate into their clinical work with women. Specifically, the research supports that women masturbate for compensatory reasons while in relationships and learning about their bodies can be a way women positively engage in sexual satisfaction. Therefore, primary health care providers should consider talking to their female patients about masturbation to assess their reasons and feelings about masturbating. Additionally, this type of open conversation can help reduce possible feelings of stigma some women experience masturbating in a relationship. Furthermore, this research can help shape conversations for policy makers in regards to sexual education reform. Masturbation has long been understood as a safe sex alternative. While this study focused specifically on women aged 25 to 35, it still contributes to the larger conversation on the prevalence of female masturbation. For sexual education curriculums, masturbation is one of the safest forms of sex and can be discussed within these courses in regards to STD and pregnancy prevention.

Overall, this study helped to demonstrate that work framed from the complimentary framework led to broader and more sexually empowered responses from

women. Similar to clinical work that takes an open, non-assuming stance, working from a sexually empowered framework or non-compensatory framework allows clinicians to gain a deeper and wider understanding of women's reasons for masturbating in a relationship, attitudes about masturbating, and masturbating behavior.

Bibliography

- Albright, J. M. (2008). Sex in America online: An exploration of sex, marital status, and sexual identity in internet sex seeking and its impacts. *Journal of Sex Research*, 45, 175–186.
- Allen, E. S., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2010). Hitting home: Relationships between recent deployment, posttraumatic stress symptoms, and marital functioning for Army couples. *Journal Of Family Psychology*, 24(3), 280–288.
- Arafat, I. S., & Cotton, W. L. (1974). Masturbation practices of males and females. *Journal of Sex Research*, 10, 293–307.
- Baćak, V., & Štulhofer, A. (2011). Masturbation among sexually active young women in Croatia: Associations with religiosity and pornography use. *International Journal Of Sexual Health*, 23(4), 248–257.
- Bancroft, J., Long, J. S., & McCabe, J. (2010). Sexual well-being: A comparison of U.S. Black and White women in heterosexual relationships. *Archives of Sexual Behavior*, 40, 725–740.
- Baumeister, R. F., Catanese, K. R., & Vohs, K. D. (2001). Is there a gender difference in strength of sex drive? Theoretical views, conceptual distinctions, and a review of relevant evidence. *Personality And Social Psychology Review*, 5(3), 242–273.
- Blumstein, P., & Schwartz, P. (1983). *American couples*. New York: Morrow.
- Bodenmann, G., Ledermann, T., & Bradbury, T. (2007). Stress, sex, and satisfaction in marriage. *Personal Relation- ships*, 14, 551–569.
- Bowman, C. P. (2014). Women’s masturbation: Experiences of sexual empowerment in a primarily sex-positive sample. *Psychology Of Women Quarterly*, 38(3), 363–378.
- Buck, A. A., & Neff, L. A. (2012). Stress spillover in early marriage: The role of self-regulatory depletion. *Journal of Family Psychology*, 26, 698–708.
- Burri, A. V., Cherkas, L. M., & Spector, T. D. (2009). Emotional intelligence and its association with orgasmic frequency in women. *Journal of Sexual Medicine*, 6, 1930–1937.
- Buzzell, T. (2005). Demographic characteristics of persons using pornography in three technological contexts. *Sexuality and Culture*, 9, 28–48.

- Bradburn, N. M., Sudman, S., Blair, E., & Stocking, C. (1978). Question threat and response bias. *Public Opinion Quarterly*, 42, 221–234.
- Brenot, P. (2005). In praise of masturbation (P. Buck & C. Petit, Trans.). London: Marion Boyars.
- Bridges, S. K., Lease, S. H., & Ellison, C. R. (2004). Predicting Sexual Satisfaction in Women: Implications for Counselor Education and Training. *Journal Of Counseling & Development*, 82(2), 158-166.
- Bridges, A. J., Bergner, R. M., & Hesson-McInnis, M. (2003). Romantic partner's use of pornography: Its significance for women. *Journal of Sex and Marital Therapy*, 29, 1–14.
- Bridges, A. J., McGahan, T.C., Andrews, A. R., III, & Anton, C. M. (2009). *Exploring pornography use within the context of romantic relationships: A survey of college students' experiences*. Manuscript in preparation.
- Bridges, A. J., & Morokoff, P. J. (2011). Sexual media use and relational satisfaction in heterosexual couples. *Personal Relationships*, 18(4), 562-585.
- Brody, S. (2010). The relative health benefits of different sexual activities. *Journal Of Sexual Medicine*, 7(4, Pt 1), 1336-1361.
- Brody S., & Costa R.M. (2009) Satisfaction (sexual, life, relationship, and mental health) is associated directly with penile-vaginal intercourse, but inversely with other sexual behavior frequencies. *J Sex Med.* 6: 1947–1954.
- Byers (2011). Beyond the birds and the bees and was it good for you: Thirty years of research on sexual communication. *Can Psychol.* 52: 20–28.
- Califia P. (1979). Lesbian sexuality. *J Homosex* 4:255–66.
- Cardamakis, E., Vinakos, G., Lambou, T., & Papathanasiou, Z. (1993). Comments by the “Information by Phone” department of the Sex Medical Institute on the telephone calls related to sexuality and contraception. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, 52, 125–129.
- Carvalho, A., & Leal, I. (2013). Masturbation among women: Associated factors and sexual response in a Portuguese community sample. *Journal Of Sex & Marital Therapy*, 39(4), 347-367.
- Catania, J. A., Pollack, L., McDermott, L. J., Qualls, S. H., & Cole, L. (1990). Help-seeking behaviors of people with sexual problems. *Ar- chives of Sexual Behavior*, 19, 235–250.

- Catania, J. A. (2011). The Dyadic Sexual Communication Scale. In T. D. Fisher, C. M. Davis, W. L. Yarber, & S. L. Davis (Eds.), *Handbook of sexuality related measures* (3rd ed., pp. 130–132). New York, NY: Routledge.
- Chivers, M.L., Seto, M.C., & Blanchard, R. (2007). Gender and sexual orientation differences in sexual response to sexual activities versus gender of actors in sexual films. *Journal of Personality and Social Psychology*, 93(6), 1108–1121.
- Cupach, W. R., & Metts, S. (1991). Sexuality and communication in close relationships. In K. McKinney & S. Sprecher (Eds.), *Sexuality in close relationships* (pp. 93–110). Hillsdale, NJ: Erlbaum.
- Curtis, D. (2004). Commodities and sexual subjectivities: A look at capitalism and its desires. *Cultural Anthropology*, 19(1), 95–121.
- Coleman, E. M., Hoon, P. W., & Hoon, E. F. (1983). Arousability and sexual satisfaction in lesbian and heterosexual women. *Journal of Sex Research*, 19, 58–73.
- Coleman, E. (2002). Masturbation as a means of achieving sexual health. *Journal of Psychology & Human Sexuality*, 14, 5–16.
- Clark, J. P., & Tifft, L. L. (1966). Polygraph and interview validation of self-reported deviant behavior. *American Sociological Review*, 31, 516–523.
- Clark, C. A., & Wiederman, M. W. (2000). Gender and reactions to a hypothetical relationship partner's masturbation and use of sexually explicit media. *Journal of Sex Research*, 37, 133–141.
- Clower, V. (1975). Significance of masturbation in female sexual development and function. In I. M. Marcus & J. J. Francis (Eds.), *Masturbation: From infancy to senescence* (pp. 104–143). Oxford, England: International Universities Press.
- Cyranoski, J.M., Bromberger, J., Youk, A., Matthews, K., Kravitz, H.M., & Powell, L.H. (2004). Lifetime depression history and sexual function in women at midlife. *Archives of Sexual Behavior*, 33, 539–548.
- Daneback, K., Træen, B., & Ma'nsson, S. A. (2009). Use of pornography in a random sample of Norwegian heterosexual couples. *Archives of Sexual Behavior*, 38, 746–753.
- Das, A. (2007). Masturbation in the United States. *Journal of Sex and Marital Therapy*, 33, 301–317.
- Davidson, K. J.Sr., & Moore, N. B. (1994). Masturbation and premarital sexual intercourse among college women: Making choices for sexual fulfillment. *Journal of Sex and Marital Therapy*, 20, 178–199.

- Davis, C. M., Blank, J., Lin, H., & Bonillas, C. (1996). Characteristics of vibrator use among women. *The Journal of Sex Research, 33*, 313–320.
- Dekker, A., & Schmidt, G. (2002). Patterns of masturbatory behavior: Changes between the sixties and the nineties. *Journal of Psychology & Human Sexuality, 14*, 35–48.
- Delmonico, D. L. & Miller, J. A. (2003). The Internet sex screening test: A comparison of sexual compulsives versus non-sexual compulsives. *Sexual and Relationship Therapy, 18*, 261–276.
- DeMaria, A. L., Hollub, A. V., & Herbenick, D. (2012). The Female Genital Self-Image Scale (FGSIS): Validation among a sample of female college students. *Journal Of Sexual Medicine, 9*(3), 708-718.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*(2), 276–302.
- Duggan, M., & Smith, A. (2013). Social media update 2013. Pew Research Center.
- Duggan, M., & Brenner, J. (2013). The demographics of social media users—2012. Pew Research Center.
- Durham, T. W., & Grossnickle, W. F. (1982). Attitudes toward masturbation. *Psychological Reports, 51*, 932–934.
- Escajadillo-Vargas, N., Mezones-Holguín, E., Castro-Castro, J., Córdova-Marcelo, W., Bluemel, J. E., Pérez-López, F. R., et al. (2011). Sexual dysfunction risk and associated factors in young Peruvian university women. *Journal of Sexual Medicine, 8*, 1701–1709.
- Fahs, B., & Frank, E. (2014). Notes from the back room: Gender, power, and (in)visibility in women's experiences of masturbation. *Journal Of Sex Research, 51*(3), 241-252.
- Falconier, M. K., Nussbeck, F., Bodenmann, G., Schneider, H., & Bradbury, T. (2015). Stress from daily hassles in couples: Its effects on intradyadic stress, relationship satisfaction, and physical and psychological well-being. *Journal of Marital And Family Therapy, 41*(2), 221-235.
- Fenton, K. A., Johnson, A. M., McManus, S., & Erens, B. (2001). Measuring sexual behavior: Methodological challenges in survey research. *Sexually Transmitted Infections, 77*, 84–92.
- Fisher, W. A., & Byrne, D. (1978). Sex differences in response to erotica? Love vs. lust. *Journal of Personality and Social Psychology, 36*, 117– 125.

- Fyfe, B. (1979). Effects of sexual enhancement workshop on young adults. *Journal of Clinical Psychology*, 35(4), 873–875.
- Gagnon, J. H., Simon, W., & Berger, A. S. (1970). Some aspects of sexual adjustment in early and later adolescence. In J. Zubin & A. M. Freedman (Eds.), *Psychopathology of adolescence* (pp. 275–295). New York: Grune & Stratton.
- Gerressu, M., Mercer, C., Graham, C., Wellings, K., & Johnson, A. (2008). Prevalence of masturbation and associated factors in a British National Probability Survey. *Archives of Sexual Behavior*, 37, 266–278.
- Givertz, M., Burke, T., Segrin, C., & Wosidlo, A. (2016). Attachment orientation moderates the relationship between dedication and constraint commitment and felt constraint in married couples. *Couple And Family Psychology: Research And Practice*, 5(1), 1-11.
- Greenberg, J. S., & Archambault, F. X. (1973). Masturbation, self-esteem, and other variables. *Journal of Sex Research*, 9, 41–51.
- Grov, C., Gillespie, B. J., Royce, T., & Lever, J. (2011). Perceived consequences of casual online sexual activities on heterosexual relationships: A U.S. online survey. *Archives of Sexual Behavior*, 40, 429–439.
- Haavio-Mannila, E., & Kontula, O. (1997). Correlates of increased sexual satisfaction. *Archives of Sexual Behavior*, 26, 399–419.
- Hald, G. M. (2006). Gender differences in pornography consumption among young heterosexual Danish adults. *Archives of Sexual Behavior*, 35(5), 577–585.
- Hald, G. M., & Malamuth, N. M. (2008). Self-perceived effects of pornography consumption. *Archives of Sexual Behavior*, 37, 614–625.
- Halpern, C. J. T., Udry, J. R., Suchindran, C., & Campbell, B. (2000). Adolescent males' willingness to report masturbation. *Journal of Sex Research*, 37, 327–332.
- Hare, K., Gahagan, J., Jackson, L., & Steenbeek, A. (2014). Perspective on “pornography”: Exploring sexually explicit Internet movie’s influences on Canadian young adults’ holistic sexual health. *Canadian Journal of Human Sexuality*, 23(3), 148–158.
- Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, 50, 93–98.
- Hendrick, S. S., Dicke, A., & Hendrick, C. (1998). The Relationship Assessment Scale. *Journal of Social and Personal Relationships*, 15, 137–142.

- Herbenick, D. D., Reece, M., Sanders, S. A., Dodge, B. S., Ghassemi, A., & Fortenberry, J. D. (2009). Prevalence and characteristics of vibrator use by women in the United States: Results from a nationally representative study. *Journal of Sexual Medicine*, 6, 1857–1867.
- Herbenick, D., Reece, M., Schick, V., Sanders, S. A., Dodge, B., & Fortenberry, J. D. (2010). Sexual behavior in the United States: Results from a national probability sample of men and women ages 14–94. *The Journal of Sexual Medicine*, 7, 255–265. A
- Herbenick, D. D., & Reece, M. (2010). Development and validation of the Female Genital Self-Image Scale. *Journal of Sexual Medicine*, 7, 1822–1830.
- Herbenick, D. D., Reece, M., Schick, V., Jozkowski, K. N., Middlestadt, S. E., Sanders, S. A., et al (2011). Beliefs about women’s vibrator use: Results from a nationally representative probability survey in the United States. *Journal of Sex and Marital Therapy*, 37, 329–345.
- Herbenick, D. D., Schick, V., Reece, M., Sanders, S. A., Dodge, B. S., & Fortenberry, J. D. (2011). The Female Genital Self-Image Scale (FGSIS): Results from a nationally representative probability sample of women in the United States. *Journal of Sexual Medicine*, 8, 158–166.
- Hite, S. (1976). *The Hite report: A nationwide study on female sexuality*. New York, NY: Macmillan.
- Hogarth, H., & Ingham, R. (2009). Masturbation among young women and associations with sexual health: An exploratory study. *Journal of Sex Research*, 46, 1–10.
- Horne, S., & Zimmer-Gembeck, M. J. (2006). The Female Sexual Subjectivity Inventory: Development and Validation of a Multidimensional Inventory for Late Adolescents and Emerging Adults. *Psychology Of Women Quarterly*, 30(2), 125-138.
- Hurlbert, D. F., & Whittaker, K. E. (1991). The role of masturbation in marital and sexual satisfaction: A comparative study of female masturbators and nonmasturbators. *Journal of Sex Education and Therapy*, 17, 272–282.
- Jankovich, R., & Miller, P.R. (1978). Response of women with primary orgasmic dysfunction to audiovisual education. *Journal of Sex & Marital Therapy*, 4(1), 16–19.
- Jovanović, V., & Brdar, I. (2018). The cross-national measurement invariance of the Satisfaction with Life Scale in a sample of undergraduate students. *Personality And Individual Differences*, 1287-9.

- Kaestle, C. E., & Allen, K. R. (2011). The role of masturbation in healthy sexual development: Perceptions of young adults. *Archives Of Sexual Behavior, 40*(5), 983-994.
- Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measure- ments: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4*, 1–39.
- Kirschbaum, A. L., & Peterson, Z. D. (2018). Would you say you 'had masturbated' if ...?: The influence of situational and individual factors on labeling a behavior as masturbation. *Journal Of Sex Research, 55*(2), 263-272.
- Knopp, K., Rhoades, G. K., Stanley, S., Owen, J., & Markman, H. (2014). Fluctuations in commitment over time and relationship outcomes. *Couple And Family Psychology: Research And Practice, 3*(4), 220-231.
- Knopp, K. C., Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2015). Stuck on you: How dedication moderates the way constraints feel. *Journal of Social and Personal Relationships, 32*, 119– 137.
- Kohut, T., & Fisher, W. A. (2013). The impact of brief exposure to sexually explicit video clips on partnered female clitoral self-stimulation, orgasm and sexual satisfaction. *Canadian Journal Of Human Sexuality, 22*(1), 40-50.
- Kohut, T., Fisher, W., & Campbell, L., (2017). Perceived effects of pornography on the couple relationship: initial findings of open-ended, participant-informed, “Bottom –up” research. *Arch Sex Behav 46*: 585-602.
- Kontula, O., & Haavio-Mannila, E. (2003). Masturbation in a generational perspective. *Journal of Psychology & Human Sexuality, 14*(2), 49–83.
- Krafka, C., Linz, D., Donnerstein, E., & Penrod, S. (1997). Women’s reactions to sexually aggressive mass media depictions. *Violence Against Women, 3*, 149 – 181.
- Kraus, F. (2017). The practice of masturbation for women: The end of a taboo?. *Sexologies: European Journal Of Sexology And Sexual Health / Revue Européenne De Sexologie Et De Santé Sexuelle, 26*(4), e35-e41.
- Lambert, N. M., Negash, S., Stillman, T. F., Olmstead, S. B., & Fincham, F. D. (2012). A love that doesn’t last: Pornography consumption and weakened commitment to one’s romantic partner. *Journal of Social and Clinical Psychology, 31*, 410–438.
- Långström, N., & Hanson, R. K. (2006). High Rates of Sexual Behavior in the General Population: Correlates and Predictors. *Archives Of Sexual Behavior, 35*(1), 37-52.

- Laumann, E. O., Gagnon, J. H., Michael, R. T., & Michaels, S. (1994). *The social organization of sexuality: Sexual practices in the United States*. Chicago, IL: University of Chicago Press.
- Ledermann, T., Bodenmann, G., Rudaz, M., & Bradbury, T. N. (2010). Stress, communication, and marital quality. *Family Relations*, 59, 195–206.
- Leitenberg, H., Detzer, M. J., & Srebnik, D. (1993). Gender differences in masturbation and the relation of masturbation experience in preadolescence and/or early adolescence to sexual behavior and sexual adjustment in young adulthood. *Archives Of Sexual Behavior*, 22(2), 87-98.
- Lindley LL, Nicholson TJ, Kerby MB, Lu N. HIV/STI associated risk behaviors among self-identified lesbian, gay, bisexual, and transgender college students in the United States. *AIDS Educ Prev* 2003;15:413–29.
- MacNeil, S., & Byers, E. S. (2009). Role of sexual self-disclosure in the sexual satisfaction of long-term heterosexual couples. *Journal of Sex Research*, 46(1), 3–14.
- MacNeil, S., & Byers, E. S. (2005). Dyadic assessment of sexual self-disclosure and sexual satisfaction in heterosexual dating couples. *Journal of Social and Personal Relationships*, 22(2), 169–181.
- Mann, J., Sidman, J., & Starr, S. (1971). Effects of erotic films on sexual behavior of marital couples. In *Technical Report of the Commission on Obscenity and Pornography* (Vol. 8, pp. 170–254). Washington, DC: U.S. Government Printing Office.
- Mark, K. P. (2011). Good in bed survey report #3: Orgasm. Retrieved from <http://www.goodinbed.com/research/good-in-bed-survey-report-3/index.php>
- Mark, K. P., Herbenick, D., Fortenberry, J. D., Sanders, S., & Reece, M. (2014). A psychometric comparison of three scales and a single-item measure to assess sexual satisfaction. *Journal of Sex Research*, 51(2), 159–169. <https://doi.org/10.1080/00224499.2013.816261>
- Marks, M. J., & Wosick, K. (2017). Exploring college men’s and women’s attitudes about women’s sexuality and pleasure via their perceptions of female novelty party attendees. *Sex Roles*, 77(7-8), 550-561.
- McCaughey, M., & French, C. (2001). Women’s sex-toy parties: Technology, orgasm, and commodification. *Sexuality and Culture*, 5, 77–96.

- McMullen, S., & Rosen, R.C. (1979). Self-administered masturbation training in the treatment of primary orgasmic dysfunction. *Journal of Consulting and Clinical Psychology*, 47(5), 912–918. <http://dx.doi.org/10.1037/0022-006X.47.5.912>
Medline:574521.
- Morales, L. (2011). Google and Facebook users skew young, affluent, and educated. The Gallup Organization.
- Morgan, E. M. (2011). Associations between young adults' use of sexually explicit materials and their sexual preferences, behaviors and satisfaction. *Journal of Sex Research*, 48, 520–530.
- Mosher, D. L. (1979). Negative attitudes toward masturbation in sex therapy. *Journal Of Sex & Marital Therapy*, 5(4), 315-333.
- Nawy, H. (1973). In the pursuit of happiness?: Consumers of erotica in San Francisco. *Journal of Social Issues*, 29(3), 147–161.
- Nelson, L. J., Padilla-Walker, L., & Carroll, J. S. (2010). “I believe it is wrong but I still do it”: A comparison of religious young men who do versus do not use pornography. *Psychology of Religion and Spirituality*, 2, 136e147.
- Oishi, S., & Diener, E. (2001). Re-examining the general positivity model of subjective well-being: The discrepancy between specific and global domain satisfaction. *Journal of Personality*, 69(4), 641–666.
- Oliver, M. B., & Hyde, J. S. (1993). Gender differences in sexuality: A meta-analysis. *Psychological Bulletin*, 114, 29–51.
- Owen, J., Fincham, F. D., & Moore, J. (2011). Short-term prospective study of hooking up among college students. *Archives of Sexual Behavior*, 40, 331–341.
- Owen, J., Keller, B., Shuck, B., Luebcke, B., Knopp, K., & Rhoades, G. K. (2014). An initial examination of commitment uncertainty in couple therapy. *Couple and Family Psychology*, 3, 232–238.
- Peter, J., & Valkenburg, P. M. (2006). Adolescents' exposure to sexually explicit online material and recreational attitudes toward sex. *Journal of Communication*, 56, 639–660.
- Petersen, J. L., & Hyde, J. S. (2011). Gender differences in sexual attitudes and behaviors: A review of meta-analytic results and large datasets. *Journal of Sex Research*, 48, 149–165.
- Phillipsohn, S., & Hartmann, U. (2009). Determinants of sexual satisfaction in a sample of German women. *Journal of Sexual Medicine*, 6, 1001–1010.

- Pinkerton, S. D., Bogart, L. M., Cecil, H., & Abramson, P. R. (2002). Factors associated with masturbation in collegiate sample. *Journal Of Psychology & Human Sexuality, 14*(2-3), 103-121.
- Poulsen, F. O., Busby, D. M., & Galovan, A. M. (2013). Pornography use: Who uses it and how it is associated with couple outcomes. *Journal of Sex Research, 50*, 72–83.
- Ramanathan, V., Sitharthan, G., Pepper, K., & Wylie, K. (2014). Masturbatory behavior and feelings: An exploratory study of Indian immigrant men in Australia. *International Journal Of Sexual Health, 26*(1), 25-40.
- Reece, M., Herbenick, D., Sanders, S. A., Dodge, B., Ghassemi, A., & Fortenberry, J. D. (2009). Prevalence and characteristics of vibrator use by men in the United States. *Journal of Sexual Medicine, 6*, 1867–1874.
- Regnerus, M., Price, J., & Gordon, D. (2017). Masturbation and partnered sex: Substitutes or complements?. *Archives Of Sexual Behavior, 46*(7), 2111-2121.
- Renshaw, K. D., McKnight, P., Caska, C. M., & Blais, R. K. (2011). The utility of the Relationship Assessment Scale in multiple types of relationships. *Journal Of Social And Personal Relationships, 28*(4), 435-447.
- Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2006). Pre-engagement cohabitation and gender asymmetry in marital commitment. *Journal Of Family Psychology, 20*(4), 553-560. doi:10.1037/0893-3200.20.4.553.
- Rhoades, G. K., Stanley, S. M., & Markman, H. J. (2010). Should I stay or should I go? Predicting dating relationship stability from four aspects of commitment. *Journal of Family Psychology, 24*, 543–550.
- Robinson, C. H. (1974). The effects of observational learning on sexual behaviors and attitudes in orgasmic dysfunctional women. *Dissertation Abstracts International, 1974*, 35, 4662.
- Rogala, C., & Tyde'n, T. (2003). Does pornography influence young women's sexual behavior? *Women's Health Issues, 13*(1), 39–43.
- Rosen R, Bachmann G. Sexual well-being, happiness, and satisfaction, in women: The case for a new conceptual paradigm. *J Sex Marital Ther 2008;34: 291–7.*
- Rosenberger, J.G., Schick, V., Herbenick, D., Novak, D.S., & Reece, M. (2012). Sex toy use by gay and bisexual men in the United States. *Archives of Sexual Behavior, 41*(2), 449–458.

- Rountree, M., Bagwell, M., Mancoske, R. J., & Deepak, A. C. (2017). Friendship and encouragement of safe-sex practices among African-American college women. *Journal Of HIV/AIDS & Social Services*, 16(2), 154-169.
- Santtila, P., Wager, I., Witting, K., Harlaar, N., Jern, P., Johansson, A., & ... Sandnabba, N. K. (2008). Discrepancies between sexual desire and sexual activity: Gender differences and associations with relationship satisfaction. *Journal Of Sex & Marital Therapy*, 34(1), 29- 42.
- Schick, V., Herbenick, D., Rosenberger, J. G., & Reece, M. (2011). Prevalence and characteristics of vibrator use among women who have sex with women. *Journal Of Sexual Medicine*, 8(12), 3306-3315.
- Schmidt, G., & Sigusch, V. (1970). Sex differences in responses to psycho- sexual stimulation by films and slides. *Journal of Sex Research*, 6(4), 268–283.
- Shuck, B., Owen, J., Manthos, M., Keller, B., Quirk, K., & Rhoades, G. (2014). Sleeping to the top: Commitment uncertainty, workplace engagement, and status motives. Manuscript under review.
- Shulman, J. L., & Home, S. G. (2003). The use of self-pleasure: Masturbation and body image among African American and women. *Psychology Of Women Quarterly*, 27(3), 262-269.
- Senn, C. Y., & Radtke, H. L. (1990). Women's evaluations of and affective reactions to mainstream violent pornography, nonviolent pornography, and erotica. *Violence and Victims*, 5, 143–155.
- Smith, A. M., Rosenthal, D. A., & Reichler, H. (1996). High schoolers masturbatory practices: Their relationship to sexual intercourse and personal characteristics. *Psychological Reports*, 79, 499–509.
- Sprecher, S. (2002). Sexual satisfaction in premarital relationships: Associations with satisfaction, love, commitment, and stability. *The Journal of Sex Research*, 39, 190–196.
- Stack, S., Wasserman, I., & Kern, R. (2004). Adult social bonds and use of internet pornography. *Social Science Quarterly*, 85(1), 75–88.
- Stanley, S., & Markman, H. (1992). Assessing commitment in personal relationships. *Journal of Marriage and Family*, 54, 595–608.
- Stanley, S. M., Markman, H. J., & Whitton, S. W. (2002). Communication, conflict and commitment: Insights on the foundations of relationship success from a national survey. *Family Process*, 41(4), 659–675.

- Stanley, S. M., & Rhoades, G. K. (2011). *Commitment Uncertainty Short Scale (CUSS)*. Unpublished measure, University of Denver.
- Story, L. B., & Bradbury, T. N. (2004). Understanding marriage and stress: Essential questions and challenges. *Clinical Psychology Review*, 23, 1139–1162.
- Stulhofer, A., Busko, V., & Brouillard, P. (2010). Development and bicultural validation of the New Sexual Satisfaction Scale. *Journal of Sex Research*, 47(4), 257–268.
- Stulhofer, A., Busko, V., & Brouillard, P. (2011). The New Sexual Satisfaction Scale and its short form. In T. D. Fisher, C. M. Davis, W. L. Yarber, & S. L. Davis (Eds.), *Handbook of sexuality-related measures* (pp. 530–532). Thousand Oaks, CA: Sage.
- Theiss J. (2011) Modeling dyadic effects in the associations between relational uncertainty, sexual communication, and sexual satisfaction for husbands and wives. *Communic Res.* 38: 565–584.
- Tiefer, L. (1995). *Sex is not a natural act and other essays*. Boulder, CO: Westview Press.
- Tiefer, L. (1996). Towards a feminist sex therapy. *Women and Therapy*, 19(4), 53–64.
- Traeen, B., Spitznogle, K., & Beverfjord, A. (2004). Attitudes and use of pornography in the Norwegian population 2002. *Journal of Sex Research*, 41, 193–200.
- Vance, C. S. (Ed.) (1992). *Pleasure and danger: Exploring female sexuality*. London, England: Pandora.
- Vaughn, M. J., & Matyastick Baier, M. E. (1999). Reliability and validity of the Relationship Assessment Scale. *American Journal of Family Therapy*, 27, 137–147.
- Valvano, A. K., Rollock, M. D., Hudson, W. H., Goodworth, M. R., Lopez, E., & Stepleman, L. (2018). Sexual communication, sexual satisfaction, and relationship quality in people with multiple sclerosis. *Rehabilitation Psychology*, 63(2), 267-275.
- Velten, J., & Margraf, J. (2017). Satisfaction guaranteed? How individual, partner, and relationship factors impact sexual satisfaction within partnerships. *Plos ONE*, 12(2).
- Wincze, J. P., & Caird, W. K. (1976). The effects of systematic desensitization and video desensitization in the treatment of essential sexual dysfunction in women. *Behavior Therapy*, 7, 335–342.

- Wishnoff, R. (1978). Modeling effects of explicit and nonexplicit sexual stimuli on the sexual anxiety and behavior of women. *Archives of Sexual Behavior*, 7(5), 455–461.
- Wright, P. J., Tokunaga, R. S., & Bae, S. (2014). More than a dalliance? Pornography consumption and extramarital sex attitudes among married U.S. adults. *Psychology of Popular Media Culture*, 3, 97–109.
- Zamboni B., & Crawford I. (2002) Using masturbation in sex therapy: Relationships between masturbation, sexual desire, and sexual fantasy. *J Psychol Human Sex* 14:123–41.
- Zhang H., Ho P., & Yip P. (2012) Does similarity breed marital and sexual satisfaction? *J Sex Res* 49:583–93.
- Zillmann, D., & Bryant, J. (1988). Pornography's impact on sexual satisfaction. *Journal of Applied Social Psychology*, 18, 438–453.

Appendices

Appendix A: Tables

Table 1: Demographic Information About Participants (N=396)

Mean Age (SD)	27.7 (2.8)	Education % (n)	
Sexual Orientation % (n)		High school or GED	2.5 (10)
Heterosexual	74.2 (294)	Some college	8.8 (35)
Bisexual	14.9 (59)	Bachelor's degree	38.4 (152)
Gay/Lesbian	4 (16)	Trade school	.8 (3)
Queer	2.5 (10)		
Asexual	.3 (1)	Religion % (n)	
Demisexual	.3 (1)	Non-religious	34.3 (136)
		Catholic/Christian	23.7 (94)
Gender % (n)		Jewish	16.7 (66)
Cis-Female	97.2 (385)	Agnostic	7.1 (28)
Gender Nonconforming	1.3 (5)	Spiritual	6.8 (27)
Gender queer	.8 (3)	Atheist	6.8 (27)
Transgender	.8 (3)	Muslim	.5 (2)
		Buddist or Hindu	1.8 (7) 2.3 (9)
Race/Ethnicity % (n)		Other Religions	1.9 (7)
White	81.3 (322)		
Asian/Pacific Islander	4.5 (18)		
Latinx	4 (16)		
Black/African American	2.3 (9)		
Middle Eastern	1 (4)		
Two or more identities	6.8 (25)		

Table 2: Means Table

	Mean	SD	Range	Alpha
Commitment Uncertainty	2.2	1.49	1-7	.81
Daily Hassles	2.28	.54	1-4	.83
Sexual Entitlement	4.57	.37	1-5	.73
Female Genital Scale	3.2	.49	1-4	.81
Sexual Communication	4.5	.84	1-6	.88
Relational Satisfaction	4.09	.70	1-5	.79
Sexual Satisfaction	3.59	.68	1-5	.88
Sex Toy use	2.6	1.45	1-6	NA (1 item)
Porn use	2.7	1.3	1-6	NA (1 item)
Positive Attitudes about Masturbating	3.1	.92	1-5	.85
Negative Attitudes about Masturbating	1.4	.60	1-5	.87
Compensatory Reasons for Masturbating	2.0	.47	1-5	.42
Complimentary Reasons for Masturbating	3.2	.60	1-5	.75

Table 3: Bivariate Correlations Table

	1	2	3	4	5	6	7	8	9	10	11	12
1. CU - SS	\											
2. Daily Hassles	.23**	\										
3. FSSI	0.08	-0.02	\									
4. FGSIS	-.10*	-.25**	.31**	\								
5. SC	-.35**	-.14**	.24**	.26**	\							
6. RAS	-.42**	-.20*	-0.01	.13**	.44**	\						
7. NSSS-S	-.33**	-0.08	.25**	.29**	.66**	.54**	\					
8. Sex Toy	0.09	0.03	.18**	.16**	0.09	-0.1	0.01	\				
9. Porn Use	.21**	.11*	.11*	0.04	-0.01	-.17**	-0.01	.45**	\			
10. Pos. FaM	0.08	0.07	.37**	.11**	.18**	-0.01	.24**	.28**	.13*	\		
11. Neg. FaM	0.1	.14**	-.29**	-.25**	-.26**	-0.06	-.16**	-.13**	-0.03	-.20**	\	
12. Compl. R.	.22**	.15**	.43**	.15**	.14**	-.12**	.14**	.34**	.37**	.62**	-.16**	\
13. Compen. R.	.37**	.19**	.11*	0.001	-.24**	-.29**	-.21**	.24**	.34**	.21**	0.07	.45**

Note: CU-SS = Commitment Uncertainty - Short Scale; FGSIS = Female Genital Self-Image Scale; FSSI: Female Sexual Subjectivity Inventory; SC = Sexual Communication; RAS = Relationship Satisfaction Scale; NSSS-S = New Sexual Satisfaction Scale – Short Version; Pos. FaM = Positive Feelings about Masturbating; Neg. FaM = Negative Feelings about Masturbating; Compl. R. = Complimentary Reasons; Compe. R. = Compensatory Reasons

* $p < .05$; ** $p < .01$

Table 4: Linear Regression Models Predicting Sexual and Relational Satisfaction

	Relational Satisfaction		Sexual Satisfaction	
	b (SE)	β	b(SE)	β
Pos.FaM	.03 (.03)	0.05	.21(.03)	.28***
Daily Hassles	-.05 (.05)	-0.04	-.04(.06)	- 0.03
CU-SS	-.29 (.02)	-.62***	-.16(.02)	-.35***

Note: Pos.FaM = Positive Feelings about Masturbating, CU-SS = Commitment Uncertainty- Short Scale, * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5: Linear Regression Models Predicting Sexual and Relational Satisfaction

	Relational Satisfaction		Sexual Satisfaction	
	b (SE)	β	b(SE)	β
FGSIS	.06 (.07)	0.04	.19(.06)	.14***
SC	.38 (.04)	.46***	.51(.03)	.64***
Neg. FaM	.13 (.06)	.11*	.06(.05)	0.06
FGSIS*Neg.FaM	.22 (.12)	0.09	.11(.10)	0.05
SC*Neg.FaM	.01 (.07)	0.01	-.03(.05)	- 0.03

Note: FGSIS = Female Genital Self-Image Scale; SC = Sexual Communication; Neg.FaM = Negative Feelings about Masturbating, * $p < .05$; ** $p < .01$; *** $p < .001$

Table 6: Linear Regression Models Predicting Sexual and Relational Satisfaction

	Relational Satisfaction		Sexual Satisfaction	
	b (SE)	β	b(SE)	β
Pos.FaM	-.01 (.04)	-0.01	.13 (.04)	.17***
FSSI	.01 (.10)	0.003	.36 (.10)	.20***
Pos.FaM*FSSI	.09 (.1)	0.04	.06 (.09)	0.034

Note: FSSI = Female Sexual Subjectivity Inventory; Pos.FaM = Positive Feelings about Masturbating, * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7: Linear Regression Models Predicting Sexual and Relational Satisfaction

	Relational Satisfaction		Sexual Satisfaction	
	b (SE)	β	b(SE)	β
Complim. R.	.03 (.05)	0.02	.34 (.06)	.30***
Compen. R.	-.46 (.08)	-.31***	-.49 (.08)	-.34***

Note: Complim. R. = Complimentary Reasons for Masturbating; Compen. R. = Compensatory Reasons for Masturbating.

** $p < .05$; ** $p < .01$; *** $p < .001$*

Table 8: Linear Regression Models Predicting Sexual and Relational Satisfaction

	Relational Satisfaction		Sexual Satisfaction	
	b (SE)	β	b(SE)	β
Porn Use	-.09 (.03)	-.16**	-.02 (.03)	-0.03
Sex Toy Use	-.04 (.03)	-0.03	-.01 (.03)	-0.02
FSSI	.04 (.1)	0.02	.47 (.09)	.26***
Sex				
Toy*FSSI	.06 (.08)	0.05	.01 (.07)	0.01
Porn*FSSI	-.002 (.08)	-0.01	-.02 (.08)	-0.01

*Note: FSSI = Female Sexual Subjectivity Inventory. * $p < .05$; ** $p < .01$; *** $p < .001$*

Appendix B: Survey Measures

1. What is your age in years? _____
2. What is your gender?
3. Which of these categories best describes your racial/ethnic background? Please choose as many that apply.
 - African American / Black
 - American Indian /Native American/ Alaska Native
 - Asian /Pacific Islander
 - Middle Eastern
 - Latino / Hispanic
 - White / Caucasian / European American
 - Prefer not to say
4. What religious and/or spiritual affiliation, if any, do identify with?

5. What is the highest degree of education you have achieved thus far?

- Middle School
- Some High School
- High School or GED
- Some College
- College
- Masters' Degree
- Doctorate Degree

6. What is your current relationship/marital status?

- Single not in a committed relationship
- In a committed, monogamous relationship
- In a committed, poly relationship
- Married

6.5. How would you describe your sexual orientation?

7. How long have you been in your current relationship in months and years?

8. How important is religion and/or spirituality in your life?

- Not important
- A little important
- Pretty important
- Very important

The Experience of Masturbating: Instructions

Masturbating is defined for this study as a sexual act done alone without the presence of a partner and does not necessarily end in orgasm.

9. Have you ever masturbated?

- Yes
- No

10. Have you masturbated within the past year?

- Yes
- No

11. Have you masturbated within the past three months?

- Yes
- No

12. Have you masturbated within the past week?

- Yes
- No

13. Masturbating is important to me.

- Strongly Agree
- Somewhat agree
- Agree
- Disagree
- Somewhat Disagree
- Strongly Disagree

14. I think the fact that I masturbate has improved my pleasure in my relationship.

- Strongly Agree
- Agree
- Somewhat Agree
- Somewhat Disagree
- Disagree
- Strongly Disagree

Female Sexual Subjectivity Inventory

1 = Strongly Disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly Agree

Factor 1: Sense of entitlement to sexual pleasure from self

15. It is okay for me to meet my own sexual needs through self-masturbation

16. I believe self-masturbating can be an exciting experience

17. I believe self-masturbation is wrong

Factor 2: Sense of entitlement to sexual pleasure from partner

18. If a partner were to ignore my sexual needs and desires, I'd feel hurt

19. It would bother me if a sexual partner neglected my sexual needs and desires

20. I would expect a sexual partner to be responsive to my sexual needs and feelings

21. I think it is important for a sexual partner to consider my sexual pleasure

Female Genital Self-Image Scale

- 1= Strongly Disagree
- 2 = Disagree
- 3 = Agree
- 4 = Strongly Agree

25. I am satisfied with the appearance of my genitals.
26. I would feel comfortable letting a sexual partner look at my genitals.
27. I think my genitals smell fine.
28. I think my genitals work the way they are supposed to work.
39. I feel comfortable letting a healthcare provider examine my genitals.
30. I am not embarrassed about my genitals.

Reasons for Masturbating

“We know that people masturbate for different reasons at different times. Please indicate how often each of the following is a reason why you masturbate.”

1. Never 2. Rarely 3. Sometimes 4. Mostly 5. Always

- 31.
1. orgasm
 2. sexual stimulation
 3. to keep me sexually satisfied when my partner is unavailable
 4. exploring/learning/understanding my body
 5. for a boost of energy
 6. to relieve tension/ to relax/ for a release
 7. to fall asleep
 8. to feel in control
 9. anger
 10. horniness
 11. because I like to
 12. to avoid partnered sex
 13. to improve my self love
 14. to learn more about my own pleasure
 15. because sex with my partner leaves me unsatisfied
 16. boredom.

New Sexual Satisfaction Scale

Thinking about your sex life during the last six months, please rate your satisfaction with the follow aspects:

1. Not at all satisfied 2. A little satisfied 3. Moderately satisfied 4. Very satisfied
5. Extremely satisfied

32. The quality of my orgasm
33. My “letting go” and surrender to sexual pleasure during sex
34. The way I sexually react to my partner
35. My body’s sexual functioning
36. My mood after sexual activity
37. The pleasure I provide to my partner
38. The balance between what I give and receive in sex
39. My partner’s emotional opening during sex
40. My partner’s ability to orgasm
41. My partner’s sexual creativity
42. The variety of my sexual activities
43. The frequency of my sexual activity

1. Very Dissatisfied 2. ... 3... 4. ... 5. Very satisfied

44. “Over the past two months, how sexually satisfied have you been with your partner?”

Feelings about Masturbating

“How does the fact that you masturbate make you feel?”

1. Never 2. Rarely 3. Sometimes 4. Mostly 5. Always

1. powerful
2. guilty
3. gross
4. ashamed
5. strong
6. sexy
7. disgusted
8. independent
9. satisfied
10. afraid of getting caught (by roommate, parent, friend, partner)
11. afraid of being judged by G/d (or another higher power)
12. selfish because I’m taking the ability to provide pleasure away from my partner
13. selfish because I’m taking time to spend on myself

Relationship Satisfaction Assessment Scale

1. Low satisfied

5. High satisfied

	Low				High
1. How well does your partner meet your needs?	1	2	3	4	5
2. In general, how satisfied are you with your relationship?	1	2	3	4	5
3. How good is your relationship compared to most?	1	2	3	4	5
4. How often do you wish you hadn't gotten into this relationship?	1	2	3	4	5
5. To what extent has your relationship met your original expectations?	1	2	3	4	5
6. How much do you love your partner?	1	2	3	4	5
7. How many problems are there in your relationship?	1	2	3	4	5

Items 4 and 7 are reverse-scored. Higher scores indicate higher satisfaction

Dyadic Sexual Communication Scale

Instructions: Below is a list of different statements people have made about discussing sex with an intimate partner. Please indicate how much you agree or disagree with each.

1. Strongly disagree 2. Disagree 3. Slightly disagree 4. Slightly Agree 5. Agree 6. Strongly agree

1. My partner rarely responds when I want to talk about our sex life.
2. Some sexual matters are too upsetting to discuss with my sexual partner.
3. There are sexual issues or problems in our sexual relationship that we have never discussed.
4. My partner and I never seem to resolve our disagreements about sexual matters.
5. Whenever my partner and I talk about sex, I feel like she, he, they, are lecturing me.
6. My partner often complains that I am not very clear about what I want sexually.
7. My partner and I have never had a heart to heart talk about our sex life together.
8. My partner has no difficulty in talking to me about his, her, their sexual feelings and desires.
9. Even when angry with me, my partner is able to appreciate my views on sexuality.
10. Talking about sex is a satisfying experience for both of us.
11. My partner and I can usually talk calmly about our sex life.
12. I have little difficulty in telling my partner what I do or don't do sexually.
13. I feel embarrassed when talking about the details of our sex life with my partner.

Added items:

14. I talk to my partner about my masturbating habits
15. I enjoy talking to my partner about my masturbating habits
16. I feel closer to my partner when we discuss our individual masturbating habits
17. I have never told my partner about my masturbating habits

Masturbating Behavior

Sex toy use was? defined as any product (homemade or store bought) designed to be used for sexual pleasure. Please indicate your use of sex toys without a partner present.

“During the past 12 months, how often did you use any sex toys to masturbate?”

- 1= none
- 2= once a month or less
- 3 = 2 or 3 days a month
- 4 = 1 or 2 days a week
- 5 = 3 to 5 days a week
- 6 = every day or almost every day

“During the past 12 months, how often did you view pornographic materials (such as magazines, movies, and/or Internet sites)?”

- 1= none
- 2= once a month or less
- 3 = 2 or 3 days a month
- 4 = 1 or 2 days a week
- 5 = 3 to 5 days a week
- 6 = every day or almost every day
-

Commitment Uncertainty – Short Scale

1. “How committed are you to this relationship?” This question is asked on a 7 point Likert style scale ranging from 1 (not at all committed) to 7 (very committed).
2. “I am unsure how committed I really am to the future of this relationship”
 1. Not at all committed
 2. ...
 3. ...
 4. Somewhat committed
 5. ...
 6. ...
 7. Very committed
3. “My commitment to my partner is a day-to-day thing at this point”
4. “My level of commitment in this relationship has been wavering”

5. "My commitment to this relationship goes up and down a lot"

1. Strongly disagree
2. ...
3. ...
4. Neither agree nor disagree
5. ...
6. ...
7. Strongly agree

Daily Hassle

"How stressful/straining are the following situations outside of your relationship?
This concern stress, which isn't connected to your partner."

7 days (acute)

12 months (chronic)

1 = not at all

1 = not at all

2 =

2 =

3 =

3 = ...

4 = very stressful

4 = very stressful

1. Job education: bustle, deadline pressure, high demands, being unchallenged, lacking acknowledgement and career opportunities, etc.
2. Social contacts: conflicts with neighbors, colleagues, acquaintances, social commitments, gossip, etc.
3. Free time: deadline pressure, too many activities, unsatisfactory recreational activities, too little time for yourself, pressure to perform, etc.
4. Children: child care, upbringing, interactions, dependence, restrictions, worries about the children, etc.
5. Family of origin: separation and dependence, conflicts, maintenance, etc.
6. Living situation: apartment size, noise, site, etc.
7. Finances: debts, lack of money, no raise, etc.
8. Daily hassles: losing or misplacing things, frequent disturbances, waiting lines, traffic jams, delays, etc.

Appendix C: Email/List Serve Recruitment

Dear _____,

My name is Gabrielle Kaminsky and I am a doctoral candidate at the University of Denver's Counseling Psychology department. I am writing to invite you to participate in my research study about women's reasons for masturbating in relationship and how it impacts sexual and relationship satisfaction. I believe your participation would be invaluable in improving our understanding of women's sexual health and masturbation practices in relationship.

All cisgender and transgender women (25 – 35 years of age) in a monogamous relationship are able to participate.

If you decide to participate in this study you will be asked to complete an anonymous survey that takes 15 minutes of your time. At the end of the survey, you are able to opt into a lottery to win 1 of 4 \$20 Amazon gift cards.

Remember, this is completely voluntary and you may opt out of the survey at any time. If you have any questions about this study you may email me at Gabe.Kaminsky@du.edu or my faculty sponsor, Dr. Jesse Owen at Jesse.Owen@du.edu.

Thank you so much.

Sincerely,

Gabrielle Kaminsky, MPhil.Ed and MS.Ed
Doctoral Candidate
University of Denver

Appendix D: Facebook Recruitment

Title: CALLING ALL MY LADIES! SEX, LOVE AND MASTURBATION

Dear Friends and Family,

Most of you have witnessed my long road through my doctoral program and I need your help to reach the finish line. I am writing to invite you to participate in my research study about women's reasons for masturbating in relationship and how it impacts sexual and relationship satisfaction. I believe your participation would be invaluable in improving our understanding of women's sexual health.

All cisgender and transgender women (25 – 35 years of age) in a monogamous relationship are able to participate.

If you decide to participate in this study you will be asked to complete an anonymous survey that takes 15 minutes of your time. At the end of the survey, you are able to opt into a lottery to win 1 of 4 \$20 Amazon gift cards.

Remember, this is completely voluntary and you may opt out of the survey at any time. If you have any questions about this study you may email me at Gabe.Kaminsky@du.edu or my faculty sponsor, Dr. Jesse Owen at Jesse.Owen@du.edu.

Thank you so much! –Gabe

Appendix E: Reddit/Craigslist/APA/AASECT Recruitment

Dear Reddit, Craigslist, APA, AASECT

My name is Gabrielle Kaminsky and I am a doctoral candidate at the University of Denver's Counseling Psychology department. I am writing to invite you to participate in my research study about women's reasons for masturbating in relationship and how it impacts sexual and relationship satisfaction. I believe your participation would be invaluable in improving our understanding of women's sexual health and masturbation practices in relationship.

All cisgender and transgender women (25-35 years of age) in a monogamous relationship are able to participate.

If you decide to participate in this study you will be asked to complete an anonymous survey that takes 15 minutes of your time. At the end of the survey, you are able to opt into a lottery to win 1 of 4 \$20 Amazon gift cards.

Remember, this is completely voluntary and you may opt out of the survey at any time. If you have any questions about this study you may email me at Gabe.Kaminsky@du.edu or my faculty sponsor, Dr. Jesse Owen at Jesse.Owen@du.edu.

Thank you so much.

Sincerely,

Gabrielle Kaminsky, MPhil.Ed and MS.Ed
Doctoral Candidate
University of Denver