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WHO OR WHAT SHOULD I BE LIKE?

THE SELF-ASSESSMENT OF SEXUAL DESIRE

By

Caroline Maykut

Bachelor of Arts McGill University 2008

A thesis submitted in partial fulfillment of the requirements for the

Master of Arts - Psychology

Department of Psychology College of Liberal Arts The Graduate College

University of Nevada, Las Vegas December 2014



We recommend the thesis prepared under our supervision by

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ABSTRACT

Who or What Should I Be Like? The Self-Assessment of Sexual Desire

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The construct of sexual desire has been notoriously difficult to capture and measure, in part as a function of questionable methods of sexual desire assessment. Due to problems finding an accurate, objective marker of sexual desire, research has relied on self-report. One notable difficulty with self-reported desire assessment is the lack of information on the context in which these assessments are made. The only available data focuses on relative assessment of sexual desire within couples, and ignores broader social and cultural contexts. The present study investigated men and women's perception of sexual desire discrepancies between themselves and other people and groups, and the extent to which these perceived desire discrepancies related to broader aspects of sexuality, personality traits, and life satisfaction. Heterosexual women (N = 407) and men (N = 178) were recruited from a university participant pool, and completed a series of questionnaires examining perceived sexual desire discrepancies, sexual function, sexual self-concept, sexual distress, sexual double-standard beliefs, personality traits, and life satisfaction. Desire discrepancy was calculated in two ways, to account for both the

direction of discrepancy (higher or lower desire relative to the comparison group), and the magnitude of discrepancy regardless of direction. Results indicated that men generally perceive their desire to be higher than comparison groups, while women generally perceive their desire to be lower. For both men and women, peers exerted the strongest influence on the assessment of overall desire levels. In general, men and women who perceived their desire to be more discrepant from comparison groups were less satisfied and more distressed with their desire levels. In women, larger perceived discrepancy, regardless of direction, was associated with lower sexual function, sexual esteem, sexual satisfaction, sexual optimism, life satisfaction, and emotional stability, as well as with higher sexual monitoring, global sexual distress, and conscientiousness. In men, larger perceived discrepancies, regardless of direction, were associated with lower sexual esteem, sexual satisfaction, sexual optimism, life satisfaction, and higher global sexual distress. These relationships were primarily observed with desire that was discrepant from what men and women thought it should be or wanted it to be.

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CHAPTER 1

INTRODUCTION

The research of the past two decades has illustrated that sexual desire is the most complex aspect of the human sexual response, and consequently the least understood. Early attempts to theorize the nature of the sexual response resulted in a simple, tri-phasic linear model positioning sexual desire (phase one) as a motivational state akin to a biological drive that was typically followed by sexual excitement/arousal (phase two) and orgasm (phase 3) (Kaplan, 1974; Masters & Johnson, 1966). The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000) based its description and diagnostic criteria for the sexual dysfunctions on this triphasic model, with distinct problems associated with each phase of the sexual response in both men and women.

Intuitive though this model of the sexual response appeared to be, recent research on women's sexuality has raised serious concerns about its validity, at least in regard to women, and especially in regard to desire. The first indication that something might be amiss was the very large numbers of women who reported low sexual desire as per the DSM-IV symptomatic criterion for Hypoactive Sexual Desire Disorder (HSDD) [upwards of 30% in various sound epidemiological studies (Meana, 2010)]. The "disorder" appeared to be almost normative. The second set of concerns was related to the fact that women reported a distinctly different experience of desire than that posited by the tri-phasic model. Many reported that they could not distinguish desire from excitement/arousal, that desire was often consequent to the beginning of sexual activity and not, in fact, a spontaneous motivational state, and that desire did not always entail a

strong imperative to sexual action. There was also the confounding social suppression of female sexual expression which made the conceptualization of desire as an unfettered biological drive problematic. Finally, women did not appear to be as distressed by the experience of low desire as one would expect someone with a "disorder" to be.

The operationalization of desire in both men and women has indeed proved difficult. In the case of women there appear to be no reliable physiological, cognitive or behavioral referents to this exquisitely subjective experience. Women experience physical arousal in the absence of desire, they do not report cognitions/fantasies to be strong indicators of desire, and they often have sex without desire or refrain from sex despite desire. We are thus left with self-report as the main assessment tool for measuring desire.

Validated self-report measures differ in the way they measure desire. Some infer level of desire by measuring the frequency of experienced desire, while others favor a scaled report of overall desire on a continuum from no desire to high desire. These methods are inherently problematic for two reasons. First, using frequency as the unit of measurement assumes that the experience of desire is a discrete event that can be recalled and counted in a systematic manner. Second, measures that rely on men and women's global self-assessment of desire neglect to explore the process through which this self-assessment occurs. Thus, self-report rating scales assess an individual's level of sexual desire, but compared to whom? This question becomes important when using self-reported low desire as a primary component of a diagnostic assessment of sexual desire disorders. If an individual considers their level of desire to be low through exclusive comparison to inappropriate sources, should we label this low desire? The present study

explored the different groups that men and women evaluate themselves against when self-assessing desire levels. Of particular interest was the extent to which sources of comparison might differ for men and women, as well as for those individuals reporting low versus high desire.

A second, related construct that is under-researched in the desire literature is the distress associated with the desire level. Without associated distress, low desire does not meet criteria for a diagnosis of a sexual desire disorder. The distress criterion was a source of much debate as researchers worked on revisions for DSM-5 (American Psychiatric Association, 2013). Some believed that it was a necessary criterion to prevent the pathologizing of diverse sexual responses, while others pointed out that it is unrelated to the existence of the disorder (e.g., an individual with schizophrenia who is not distressed still has schizophrenia; Althof, 2001). Ultimately, the distress criterion was retained in DSM-5. In any case, the question of associated distress is an important one with a huge effect on prevalence rates for desire disorders, which are halved in women when associated distress is required. Curiously, the literature rarely asks men about the presence of distress in relation to their sexual desire. A further level of complexity is the fact that the distress may emanate from the relational consequences of a desire discrepancy in a couple and not from the individual's distress about their desire level. When such discrepancies occur, it is traditionally the person with higher desire who is deemed the healthier one, arbitrary though that may seem. Research shows that this designation is more likely to be given to the man in a heterosexual couple.

Additionally, assumptions about distress accompanying low sexual desire abound.

Popular belief holds that personal and relational distress should accompany low, but not

high, sexual desire. Given the way in which men and women have been differentially pressured to experience or express desire, one might theorize that women with low desire will have different reports of distress than men with low desire, or that the nature of distress in a woman with low desire will differ from that of a woman with high desire. Uncovering the nature of the distress that may or may not accompany varying levels of sexual desire may challenge these long-held assumptions that are inhibiting progress in our conceptualization of desire disorders.

In an attempt to add some clarity to the question of desire self-assessment and associated distress, we first reviewed the literature on prevalent models of the sexual response, the prevalence of low desire and associated distress in men and women, as well as the difficulties potentially plaguing the self-assessment of sexual desire. Following the literature review, we present the design and results of a preliminary study investigating the perception of discrepancies in sexual desire between individuals and other people and groups, and the relationship between perceived desire discrepancies and sexual function, sexual distress, sexual self-concept, sexual attitudes, personality and life satisfaction.

CHAPTER 2

LITERATURE REVIEW

In the following section, literature relevant to the present study is reviewed. This literature review will cover: 1) traditional models of the sexual response, 2) concerns about the validity of traditional models 3) the operationalization of sexual desire, 4) the associated distress criterion of sexual desire disorders.

Traditional Models of the Sexual Response

In 1966, Masters and Johnson published their groundbreaking *Human Sexual Response*, in which they proposed a four-stage linear model of the sexual response based on their laboratory research of physiological changes associated with arousal and orgasm. Masters and Johnson reported the existence of four stages in the sexual response: excitement/arousal, plateau, orgasm, and resolution. They claimed that the stages were sequential and purportedly identical for men and women. Consequently, both Kaplan (1977) and Lief (1977) remarked that Masters and Johnson's model was missing a motivational stage that drove individuals to seek out sexual stimulation. The model was missing the construct of sexual desire. Kaplan (1977) reworked the original model into a triphasic version consisting of desire, arousal (encompassing Masters and Johnson's excitement/arousal and plateau phases) and orgasm.

Kaplan's (1977) tri-phasic model of the sexual response has formed the basis for diagnoses of sexual dysfunctions since DSM-III (American Psychiatric Association, 1980), with distinct disorders associated with each phase of the sexual response. Sexual dysfunctions were separated into disorders of sexual desire (Hypoactive Sexual Desire Disorder [HSDD], Sexual Aversion Disorder [SAD]), sexual arousal (Female Sexual

Arousal Disorder [FSAD], Male Erectile Disorder [ED]), and orgasm (Female Orgasmic Disorder [FOD], Male Orgasmic Disorder [MOD], Premature Ejaculation [PE]), with the additional category of the sexual pain disorders (Dyspareunia, Vaginismus) that stand outside of the purported sexual response cycle. This sequential framework has been called into question in recent years, following research that suggests a much more complex, more diverse, and less linear pattern of sexual response, notably in the case of women. Of particular concern was the construct of desire and the diagnostic category of HSDD, which was defined in DSM-IV-TR (American Psychological Association, 2000) as "persistently or recurrently deficient (or absent) sexual fantasies and desire for sexual activity" which causes "marked distress or interpersonal difficulty". Under this definition, HSDD yielded suspiciously high prevalence rates in women and was difficult to distinguish from arousal problems. Research also indicated that HSDD and the sexual response cycle on which the sexual dysfunctions were based were more problematic than previously thought, especially in regard to women. The revised DSM-5 (APA, 2013) reflects some modification to this traditional structure of sexual dysfunction conceptualization, which will be referenced throughout this review, as indicated.

Questions about the Validity of the Masters and Johnson/Kaplan Model's Characterization of Desire

Models and constructs are generally only as good as their empirical support.

Although models are often hard to test in their entirety, data from different sources can attest to their validity or that of their components. The data available on the prevalence of low desire, the relationship of desire to arousal, the genesis of desire, its supposed goal, and its mediation by interpersonal and social contexts raises important issues regarding

the validity of desire (and consequently disorders of sexual desire) as represented in traditional models of the sexual response and in the DSM.

Differences in the prevalence of low desire in men and women

Large-scale, epidemiologically sound surveys such as the National Health and Social Life Survey (NHSLS: Laumann, Paik, & Rosen, 1999), the National Survey of Sexual Attitudes and Lifestyles (NATSAL: Mercer, et al. 2003), and the Global Study of Sexual Attitudes and Behaviors (GSSAB: Laumann et al, 2005) have provided data on the prevalence of a wide range of sexual problems, including self-reported low desire. Though these studies differ in their methods of data collection (in-person interviews vs. questionnaires vs. computer-assisted interviews), their results are consistent. The NHSLS, the most comprehensive survey of sexual practices of adults in the United States to date, provided data on sexual difficulties in approximately 3,000 adults aged 18-59. In this sample, 27-32% of women and 14-17% of men with at least one sexual partner in the past year reported a lack of sexual desire lasting at least several months. More recently, the NATSAL surveyed 11,161 British women and men, of whom 40.6% and 17.1%, respectively, reported low desire lasting at least one month. In fact, low desire was the most commonly reported concern in both genders, with a prevalence rate nearly triple that of the other problems assessed. Low desire was also the most commonly reported concern in the GSSAB, which surveyed 27,500 men and women in 29 countries, with 26-43% of women and 13-28% of men reporting low desire. Shiften and colleagues' (2008) study of 13,582 women in the United States provides further evidence of the high prevalence of low desire, reported by 34% of their sample. It is important to note, however, that none of the aforementioned studies inquired about distress associated with

desire levels and therefore do not reflect prevalence rates of HSDD, per se, as a diagnosis of HSDD requires marked distress or interpersonal difficulty. The prevalence rates of low desire reflect the endorsement of the single symptomatic criterion defined in the DSM-IV-TR (i.e., persistently and recurrently deficient (or absent) sexual fantasies or desire for sexual behavior). The wording of this criterion suggests the existence of normative levels of desire against which individuals can assess their desire levels to be deficient (or have clinicians assess the same).

However, no such standards exist. Arguably, even if they did, it is not clear that failing to meet them would necessarily constitute a problem unless there was significant distress associated with the "deficiency." Even in the case of associated distress, one would have to investigate whether the distress was imposed by a perceived failure to meet societal standards (real or imagined) or those of a higher desire partner. The subjective nature of judgments about desire levels make it difficult to determine the extent to which desire problems arise from socially or interpersonally imposed expectations. In any case, one could argue that a disorder that affects upwards of 30% of a population (women, in this case) may not be a disorder at all.

Difficulty distinguishing desire from arousal

Other vexing issues in the consideration of sexual desire and traditional models of the sexual response are the distinction between desire and arousal and, relatedly, their temporal relationship to one another. The construct of sexual arousal can be subdivided into both physiological (genital vasocongestion) and subjective (mental/emotional feeling of being "turned on") components. This distinction between physiological and subjective arousal, however, was not recognized by Masters and Johnson/Kaplan during the

development of the tri-phasic model. Masters and Johnson's assessment of nearly 700 men and women did not include an evaluation of subjective arousal but instead emphasized vasocongestion as the sole indicator of arousal (Laan & Everaerd, 1995). The Masters and Johnson/Kaplan model characterizes the sexual response as consisting of discrete, sequential stages with the attendant assumption that desire is easily distinguished from arousal, and that desire is a necessary precursor to arousal. However, data do not seem to support this characterization, especially in women. Rather, explorations of desire and arousal reveal that women, and to a lesser degree, men, have considerable difficulty drawing such a distinction. The experience of sexual desire appears to be qualitatively similar to the experience of subjective sexual arousal.

Due to the subjective nature of both sexual desire and subjective sexual arousal, empirical attempts to distinguish the two have relied on qualitative methods. Graham, Sanders, Milhausen, and McBride (2004) led focus groups of demographically diverse women on the topics of sexual desire/interest (used interchangeably), subjective arousal, and their relationship. A number of women stated that they could not differentiate between sexual interest and subjective arousal. Some even had difficulty distinguishing physiological arousal from desire/subjective arousal. In those women who did perceive desire/subjective arousal and physiological arousal to be discernible states, there was variation in reports of their temporal sequence. Some identified desire as a precursor to physiological arousal, as per traditional models of the sexual response, while others noted an increase in sexual desire following physiological arousal. Goldhammer and McCabe (2011) found a similar pattern in their qualitative study of 40 partnered heterosexual women aged 20-61. A number of their participants stated that sexual desire and arousal

co-occur in their experiences. Interestingly, when asked to provide synonyms for sexual desire, responses included "turned on" and "sexual excitement," terms that are frequently used in definitions of subjective arousal, and some women offered up the term "sexual arousal" itself to describe desire.

Further evidence comes from Brotto, Heiman, and Tolman (2009) who used indepth interviews with women with and without Female Sexual Arousal Disorder (FSAD) (n=10 and n=12) to explore their personal experiences of desire. FSAD is characterized by a "persistent or recurrent inability to maintain, until completion of the sexual activity, an adequate lubrication-swelling response of sexual excitement" which causes "marked distress or interpersonal difficulty" (APA, 2000). When women were asked to describe their experience of sexual desire, the resulting narratives again revealed that desire and subjective arousal were experienced as one and the same. The nature of the desire-arousal relationship qualitatively reported by women in these studies underlines the blurring of a distinction that traditional models of the sexual response had taken for granted as well-delineated.

At this point, it is unclear whether men also have difficulty distinguishing between desire and arousal, as findings have been mixed. In Reagan and Berscheid's (1996) study of how men and women define sexual desire, men were less likely than women to describe sexual desire as a physiological state resembling physical arousal. However, their perceptions of sexual desire were hardly unanimous. Motivational, emotional, cognitive, and physiological descriptors were all used (though desire as a motivational state was most frequently endorsed, in 86.8% of the male sample), leading the authors to conclude that a common understanding of desire does not exist. Beck,

Bozman, and Qualtrough (1991) asked 144 college men and women to describe their personal indicators of sexual interest (desire). Contrary to Reagan and Berscheid's findings, men in their sample were more likely than women to use genital arousal as an indicator of desire. Finally, Janssen and colleagues (2008) conducted focus groups with 50 men aged 18-70, inquiring about their experience of sexual desire and arousal. Men were mostly unable to differentiate between desire and arousal, and reported the same temporal variations as did women in Graham et al's (2004) sample.

Essentially, no data exist to support a clear distinction between sexual desire and subjective sexual arousal. The two constructs are currently best conceptualized as the same phenomenon. Indeed, a notable update to the DSM-5 is the collapse of HSDD and FSAD into the new diagnostic category of Sexual Interest/Arousal Disorder (SIAD), which can be applied to women. The diagnosis of HSDD was retained for men in DSM-5, given the lack of similarly convincing data that desire and subjective arousal are indistinct for men.

The difficulty distinguishing sexual desire from sexual arousal does not seem to occur, however, when it comes to physiological arousal. Although some men and women indeed have difficulty making this distinction, it appears to be relatively clear for most individuals. Data actually show that desire/subjective arousal and physiological arousal are often decoupled, with correlations between the two moderate in men and very low in women. The DSM-IV-TR, whose categorization of sexual dysfunctions is based on the tri-phasic model, fails to differentiate between physiological and subjective arousal, thus implying that they are "interdependent aspects of the same underlying construct of sexual arousal" (as described by Rellini, 2005). Following this logic is the assumption that

physiological and subjective sexual arousal should correlate highly. However, a considerable amount of data suggest that this is not the case.

Laan and Everaerd (1995) were among the first to examine the relationship between subjective and physiological sexual arousal in a laboratory setting. Results from their series of studies revealed that the correlation was highly variable and often non-significant. More recently, a meta-analysis of 132 studies reporting correlations between physiological and subjective arousal (Chivers et al, 2010) provided overall correlations of .66 for men and .26 for women. For women, in particular, physiological and subjective arousal appear to be only loosely related to each other. The low correlation appears to result from a relatively indiscriminant pattern of genital arousal in women. In a series of elegant studies, Chivers and colleagues demonstrated that female genital vasocongestion occurred in the presence of any type of sexual stimulus and in the absence of subjective arousal, while male vasocongestion was mostly limited to sexual stimuli that aligned with their preferences (Chivers et al, 2004; Chivers & Bailey, 2005; Chivers, Seto, & Blanchard, 2007).

What these data tell us is that women, in particular, can experience physiological changes associated with sexual arousal in the absence of subjective arousal/desire. This has now been shown reliably in laboratory studies and in reports of coercive sex wherein women have reported lubrication despite being horrified at the situation they found themselves in (Levin & van Berlo, 2004). However, neither of these examples relate directly to a naturalistic sexual situation or response. Though subjective arousal/desire and physiological arousal are clearly distinct phenomena that do not always co-occur, two alternative theories of sexual response suggest that they actually overlap in the sexual

response cycle; Basson's circular model of the sexual response and the incentivemotivational theory of the sexual response.

Basson (2000) suggests that women may seek sexual activity or be receptive to it for non-sexual desire reasons such as wanting to be close to a partner or wanting to please them. However, once sexual activity starts and they become physiologically aroused, sexual desire/subjective arousal is instated. Thus, desire does not necessarily precede arousal and the two can co-occur throughout the course of sexual activity.

Basson's emphasis on the instigating role of physiological arousal in the experience of desire is shared by a group of Dutch researchers who have proposed an incentive-motivational model of sexual response (Both, Everaerd & Laan, 2007; Everaerd & Laan, 1995; Laan & Both, 2008) wherein sexual stimuli, real or imagined, activate physiological changes that prepare the individual for sexual activity (as described by Meana, 2010). Feelings of sexual desire result from awareness of the sexually aroused state of the body and brain. Hence, this theory also contrasts with the Kaplan model in that sexual desire does not necessarily precede physiological arousal, but rather results from it.

Spontaneous versus responsive desire

A related issue to the temporal relationship between desire/subjective arousal and physiological arousal is the question of how desire arises. Sexual desire has been theorized to be either spontaneous, occurring in the supposed absence of sexual stimuli (Masters & Johnson, 1966), or responsive, occurring consequent to exposure to sexual stimuli (Basson, 2000; Laan & Both, 2008). Research has indicated that male sexual desire may indeed be more spontaneous than that of women and better aligned with the

traditional linear model of the sexual response. Men tend to describe their desire as a motivational state more so than a cognitive or emotional one (Reagan & Berscheid, 1996). A review by Baumeister, Catanese, and Vohs (2001) found strong support in the literature of a higher frequency of sexual thoughts and higher frequency of spontaneous arousal in men than in women. Women, on the other hand, report fewer sexual thoughts and fantasies, less desire overall, and less initiation of sexual activity (for a review, see Meana, 2010).

Through its emphasis on desire as a motivational state, the sequential tri-phasic model of the sexual response, wherein desire invariably precedes arousal, assumes that desire is spontaneous. The DSM-IV-TR definition of HSDD reflects this assumption with its lack of reference to context or stimuli. The lack of alignment between this model and the available empirical and clinical case data on women is what led to the proposal of an alternate model of the sexual response. Rosemary Basson (2000) proposed a circular model wherein the sexual response proceeds in a more complex, circular fashion, and wherein desire in women is theorized to be most often triggered by 1) partner advances or 2) through sexual activity that the woman agrees to initially for nonsexual, intimacyrelated reasons. In other words, desire is theorized to be a receptive phenomenon at least as often (probably even more for women) as it is a spontaneous one. In Basson's model, sexual desire is not a necessary motivational state leading to sex and consequent arousal. A number of other motivations, such as the desire for intimacy and closeness, may be just as likely gateways to sex and arousal which can then trigger desire due to their reinforcing characteristics.

Although there are some data to suggest that Basson's model may better capture the sexual experience of some women (and men) than the traditional model, it is a difficult model to test in its entirety because of its multifactorial and bidirectional nature. One direct test of the model assessed the extent to which a community sample of 111 partnered women aged 25-69 endorsed written descriptions of the Masters and Johnson, Kaplan, and Basson models as reflective of their experience (Sand & Fisher, 2007). There was no significant difference in the number of women who endorsed each of the three model descriptions. Interestingly, those women who endorsed Basson's model as most true to their experience obtained the lowest scores on the Female Sexual Function Index, a measure of sexual function that includes questions on sexual desire, arousal, orgasm, satisfaction, and pain (Rosen et al, 2000). Giles and McCabe (2009) reported a similar pattern in their survey of 404 women aged 18-65, with Basson's model best suited to the sexual responses of women with sexual difficulties. The linear model appeared to be a better fit for women with no reported sexual problems.

If desire is the motivation, what is the goal?

In Kaplan's model of the sexual response, sexual desire is characterized as a goal-oriented motivational state. Following the sequence of the model, it is also clear that the goal is assumed to be sexual activity generally and orgasm specifically. However, the literature suggests that sexual activity/orgasm is not always the singular goal of sexual desire, especially for women. In Brotto, Heiman, and Tolman's (2009) qualitative study of women's experience of desire, a minority of women considered orgasm to be the goal of sexual activity. Emotional connection was cited as the most common reason for engaging in sex (80% of the FSAD group and 75% of the control group). Emotional

connectedness was one of the top reasons, along with physical pleasure, given for wanting sex in Meston and Buss' (2007) study of a large sample of men and women. Graham et al's (2004) study with focus groups of women revealed a theme that the feeling of being desired, in and of itself, was sufficiently arousing. It is plausible that for some women, the feeling of being desired may be satisfaction enough. These results are in line with Basson's (2001) circular model of sexual response which places emotional and/or physical satisfaction as a primary goal of sexual desire.

The question of whether feeling desired by a partner increases arousal has been explored considerably less in men, likely due in part to the characterization of men as less relationally driven than women. However, the men in Janssen et al's (2008) focus group commented that feeling desired by their partners was an enhancer of their own desire and arousal.

Social pressures on the experience and expression of desire

A final concern regarding the validity of the traditional model's characterization of desire is the erroneous assumption that men and women are equally able to experience, recognize, and express their sexual desire. Underlying this assumption is a disregard for the opposing social and cultural messages that influence the expression of male versus female sexual desire; specifically, messages that encourage the expression of men's desire and suppress the expression of women's desire (the sexual double standard).

The sexual double standard promotes permissive sexual attitudes in men and rewards them for attempted and consummated heterosexual sex while derogating women for the very same. Gender-specific social norms govern the "acceptable" number of sex partners, the conditions that permit sexual activity, and the appropriate motives for sexual

behavior. Indeed, research on sexual behavior suggests that men are more likely than women to engage in sex outside of committed relationships, and are less discriminatory with regards to both the quality and quantity of sexual partners (see Baumeister, Catanese, & Vohs, 2001 for a review). Though sexual attitudes may have generally moved toward more egalitarian standards in Western society, recent data show that subtler versions of the sexual double standard persist (see Crawford & Popp, 2003 and Kaeager & Staff, 2009 for reviews). For example, research on initiation of sexual behavior in young men and women shows that men are more likely than women to initiate sexual behavior in dating relationships (Morgan & Zubriggen, 2007; Vannier & O'Sullivan, 2010), and women are more likely to feel obligated to consent to sexual action (Morgan & Zurbriggen, 2007).

Regan and Dreyer (1999) examined motives for engaging in casual sex in 105 college aged men and women. Participants were asked to describe their reasoning for engaging in a casual sex encounter in a free response essay format. Twenty six per-cent of men and only 4.9% of women stated that a casual sex encounter would increase their social status, while 12.5% of men and 0% of women cited that it was normative peer group behavior.

Dworkin and O'Sullivan (2007) conducted interviews with 32 heterosexual men aged 18-24 in committed relationships regarding the ways in which they struggle with and adhere to gender normed sexual behavior, specifically in regards to initiating sexual activity. Reported patterns of initiation were coded as either male-dominated, egalitarian, or female-dominated, according to whether men described sexual initiation as mostly or solely self-initiated, shared, or mostly/solely initiated by their female partner. Fifty-six

percent of their sample reported a pattern of male-dominated initiation. Seventy-two percent of this group, however, desired a more egalitarian pattern of initiation. Their reasoning for their current practice was based on either adherence to perceived gender norms (i.e., being the man) or personality differences (e.g., being the more aggressive partner). The sexual double-standard can also serve to exert pressure on men. Men with low sex drives or who avoid casual sex may feel inadequate. The sexual double-standard also places a higher demand on male performance, increasing the likelihood of performance-related anxieties (Zilbergeld, 1999).

Socialization practices intended to suppress the expression of female desire are well-documented. For example, sexual education curricula have traditionally focused on male desire and have taught girls to control male desire-driven sexual activity rather than acknowledge their own desire (Fine & McClelland, 2006). As a result, adolescent girls appear to place less value on their desire experiences. Tolman (1994) conducted semi-structured interviews with heterosexual (n=27), bisexual (n=2) and lesbian (n=1) juniors and examined their descriptions and narratives of sexual desire. Two-thirds of this sample reported feeling desire, while the remaining third either denied sexual feelings, or were unable to clearly label or articulate their sexual feelings. Among the girls who did acknowledge experiencing desire, a common theme that emerged was a struggle with these feelings, specifically if/how to act upon sexual desire, with their main concern being how to remain "good" and "normal." A related theme was recognition of a contradiction between their feelings and what they were "supposed" to feel, for example "having to be the one to say no" during a sexual encounter.

Interestingly, similar themes were uncovered in Smith's (2012) analysis of how teenage girls' sexual desire is represented in popular films. Smith reviewed 34 popular teenage films from 2000-2009 and identified the number of scenes that showed an expression of sexual desire prior to sexual interaction. In the final collection of 130 scenes, the following three themes were identified: 1) sexual desire is unspoken, 2) only "bad" girls verbalize sexual desire, and 3) expression of sexual desire results in negative consequences. More recent qualitative research with adolescent girls suggests that the experience of desire during sexual activity continues to be diverted. Burns, Futch, and Tolman (2011) analyzed narratives from 98 girls aged 12-17 regarding their first experiences giving oral sex to a male partner. They found little evidence of pleasure or desire-related themes. Rather, there was an overwhelming emphasis on the performance aspect of sexual activity – whether or not they were "good enough" and met perceived normative standards.

Two main theories are offered to explain the suppression of female sexual desire. Male control theory posits that women naturally possess a high sex drive, but men suppress female sexual drive in order to preserve their own dominant status. Motives may include the desire to prevent their partner from seeking sex elsewhere, or envy of women's greater physical capacity for sexual intercourse and orgasm (Baumeister & Twenge, 2002). Conversely, female control theory suggests that women take the reins in suppressing female sexuality. While this may seem counterintuitive, there may in fact be a strong underlying motivation for women engaging in a suppression of their own gender's sexual expression. First, through widespread suppression of female sexuality, women could decrease the likelihood of infidelity on the part of their male partners

(Baumeister & Twenge, 2002). Second, women could obtain better resources from men in exchange for sexual intercourse if the commodity of sex is scarce. If fewer women express desire for sex than their male partners, the male partners must increase what they are willing to offer to receive sex (Baumeister & Twenge, 2002).

It is clear that male and female sexuality do not develop under the same conditions and are not expressed in the same manner. Whether the gender differences in the expression of sexual desire are socially constructed or evolutionarily adaptive, a model of the sexual response intended to reflect both male and female experiences is likely to be problematic. Definitions of sexual desire as well as sexual desire disorder criteria that align with either men or women's experience would necessarily pathologize the experience of the other gender.

A perspective offered by the Working Group for a New View of Women's Sexual Problems as an alternative to the DSM has attempted to encompass the potential experience of both men and women (Tiefer, 2001). According to the New View classification system, "sexual problems are defined ... as discontent or dissatisfaction with any emotional, physical, or relational aspect of the sexual experience" (Working Group for a New View of Women's Sexual Problems, 2001). This system allows women (and men) to identify which components of their sexual function are problematic and which are not. A crucial element that differentiates this system from the DSM is its focus on factors that contribute to sexual dissatisfaction, rather than a focus on symptoms.

Though the application of the New View model would pose a unique set of challenges (see Brotto, 2009), it would resolve some longstanding issues with the traditional diagnostic system.

Changes to the DSM-5 have attempted to correct some of these longstanding concerns with the traditional model of sexual response. As previously noted, the collapse of HSDD and FSAD into the new diagnosis of SIAD reflects the lack of distinction between sexual desire and subjective sexual arousal in women. SIAD also utilizes polythetic criteria, such that two women with different symptom presentations may both meet criteria. To meet criteria for SIAD, a woman must endorse three of the following symptoms for a minimum of six months: lack of interest in sexual activity, reduced or absent erotic thoughts, lack of initiation and receptivity to sexual activity, reduced pleasure during sex, reduced or absent desire emerging during a sexual encounter, and a reduction in genital or non-genital sensations. Finally, specifiers for SIAD pay increased attention to contextual factors by considering partner or relationship factors, individual vulnerabilities (e.g. poor body image), cultural or religious factors, and medical factors in diagnosis. While the impact of these changes remains to be seen, they reflect an attempt to rectify an approach that has proven increasingly problematic.

Operationalizing Desire in Men and Women

The ways in which a researcher measures sexual desire naturally depends on how they define it and vice versa. As it became increasingly clear that sexual desire was more complicated than a simple motivational state aimed at sexual action, researchers began to closely examine the role of physiological, cognitive, and behavioral processes that might signal the experience of sexual desire. These attempts have been largely unsuccessful, with the available data providing unconvincing evidence of an objective, reliable measure of desire. Consequently, the very definition of sexual desire remains under debate.

Proposed definitions vary in the extent to which they emphasize behavioral, cognitive, or motivational aspects of desire. For example, Levine (2002) defined desire as "the sum of forces that incline us toward and away from sexual behavior." Levine's emphasis on sexual behavior is not shared by Regan and Berscheid (1999) who describe sexual desire as "a psychological state subjectively experienced by the individual as an awareness that he or she wants or wishes to attain a (presumably pleasurable) sexual goal that is currently unattainable." Some have alternately tried to define lack of sexual desire. Basson et al (2003) proposed that low desire be defined as "absent or diminished feelings of sexual interest or desire, absent sexual thoughts or fantasies and a lack of responsive desire. Motivations (here defined as reasons/incentives) for attempting to have sexual arousal are scarce or absent." These definitions are problematic because existing data do not point to reliable physiological, cognitive, or behavioral referents of desire that can anchor such definitions.

Physiological referents of desire

Though Kaplan's conceptualization of sexual desire is based on biological underpinnings insofar as desire is a motivational state seeking satisfaction, data suggest that physiological response often fails to accompany desire, at least in the case of women. As aforementioned, genital response correlates poorly with reported subjective arousal in women (Chivers et al, 2010). Women show genital arousal to films of non-preferred gender (Chivers et al, 2004) and non-preferred sexual activities, including sexual coercion and sexual violence (Laan et al, 1995; Both et al, 2003; Suschinsky & Lalumière, 2011).

Men's physiological arousal, on the other hand, appears to be more specific to their stated sexual preferences (Chivers, 2005) and more highly correlated with their subjective sexual arousal (r=.66 as reported by Chivers, 2010). This should not be interpreted, however, as evidence that male sexual desire can be gauged solely through physiological responding. Both qualitative (Beck et al, 1991; Janssen, 2008) and quantitative (Derogatis, 2012) investigations confirm that male sexual desire is also hard to tie to physiological indicators as men routinely report erections in the absence of desire.

Cognitive referents of desire

The DSM-IV-TR diagnosis of HSDD and the DSM-5 diagnosis of SIAD reference an absence of sexual thoughts or fantasies, suggesting that fantasies are a common element of the experience of sexual desire. However, the little data that exists on sexual fantasy and its relationship to desire in both men and women are inconsistent.

Beck et al (1991) asked 58 men and 86 women ages 18-54 to report which of the following most accurately reflected their level of sexual desire: sexual dreams, sexual fantasies, sexual daydreams, intercourse frequency, masturbation frequency, number of sexual contacts not ending in intercourse, and genital arousal. Only 6% of women and 29.8% of men reported that sexual fantasies were most reflective of their level of sexual desire, while 17.9% of women and 19.3% of men indicated that sexual daydreams were. Of Reagan and Berscheid's (1996) 136 male and female participants who identified a state (cognitive, physiological, behavioral, motivational) in their own definition of sexual desire, only 6.6% identified desire as a cognitive state which includes sexual thoughts and fantasies, with no significant gender differences. Most women in Goldhammer and

McCabe's (2011) sample reported that sexual thoughts and fantasies did not play a role in their experience of desire. Interestingly, women in this sample reported intentionally invoking sexual fantasies to increase sexual arousal and facilitate orgasm once sexual activity was already underway. In Carvalheira, Brotto, and Leal's (2010) survey of 3,687 Portuguese women, only 12% reported fantasizing often, and half reported fantasizing sometimes.

Select studies do report an association between sexual fantasy and sexual desire. Purifoy, Grodsky, and Giambra (1992) found that sexual daydreams were associated with sexual interest in their survey of 117 Dutch women aged 26-78. Similarly, Carvahlo and Nobre (2011) found that "lack of erotic thoughts" was the strongest predictor of sexual desire in a convenience sample of 205 Portuguese men.

Though somewhat mixed, the majority of empirical data do not support a strong link between sexual desire and fantasy. This calls into question the validity of the current DSM diagnostic criteria, which suggest that the absence of fantasy is symptomatic of low desire.

Behavioral referents of desire

The other attempt at operationalizing sexual desire has been to measure sexual behavior. This follows the assumption of the tri-phasic model that sexual desire is the first stage in a sequence that follows through to sexual activity and ends in orgasm. This logic has inspired the more behaviorally-focused definitions of sexual desire, such as those proposed by Levin (2002) and Pfaus (2006), who defines sexual desire as a "desire for, and fantasy about, sexual activity." However, research on motivation for sexual activity reveals that men and women engage in sex for a variety of reasons often

unrelated to desire. Hill and Preston (1996) proposed a model of eight incentives for sexual behavior, including, intimacy, demonstrating appreciation for the partner, and physical pleasure. More recently, Meston and Buss (2007) asked 444 men and women to provide reasons why people might engage in sexual activity. Their final collection of 237 distinct reasons were included in a survey of 1,549 undergraduate men and women, who were asked to rate the frequency with which each reason motivated their sexual activity. The most frequently endorsed reasons by men and women included a combination of both sexual (e.g., to experience pleasure) and non-sexual (e.g., to escalate the relationship) reasons. In Beck et al's (1991) sample, 82% of women and 60% of men reported having engaged in sexual activity without desire. Shotland and Hunter (1995) asked 378 college women if they had ever consented to sex that they did not want. Thirty-eight percent of their sample reported having engaged in "compliant sex", citing predominantly relationship-maintenance reasons. Collectively these data confirm that the reasons individuals give for engaging in sex are often not related to desire at all.

Alternately, men and women also refrain from sex despite feeling desire. In Beck et al's (1991) sample, a small percentage (9% of males and 8% of females) reported that their sexual desire rarely or never resulted in sexual activity. A theme that emerged in Tolman's (1994) sample of adolescent girls was choosing to refrain from sex, and even attempting to curb feelings of desire, for reasons of physical, social, or emotional safety. Similarly, women in Brotto et al's (2009) and Graham et al's (2004) samples noted that feeling desire did not necessarily persuade them to engage in sexual activity. More recently, Lanti (2012) asked 604 men and women aged 18-77 to list reasons why they had avoided (or thought others might avoid) engaging in sex with an attractive, willing

partner when they experienced sexual desire. Thirteen distinct categories of reasons were identified from their open-ended response format. Fifty-six percent of their sample listed reasons that were value-based, including preserving virginity, limiting their number of sex partners, and refraining from sex that did not "feel right." Other commonly cited reasons fell into the category of safety/risk (e.g., not having a condom, not wanting to risk pregnancy or sexually transmitted infections) and protecting existing relationships (e.g., not wanting to cheat, not wanting to risk ruining a friendship).

Given this array of findings, it is clear that sexual behavior is as unreliable an indicator of sexual desire as physiological responses to sexual stimuli or cognitive processes. Consequently, researchers are left to evaluate sexual desire primarily via self-report.

Self-report as measure of sexual desire

Self-report can indeed provide important information on sexual desire but it remains problematic for the typical reasons (e.g., recall bias, the ability of people to accurately assess what they were feeling at any point in time). The self-report of desire may also present some additional challenges, as nobody seems to be quite clear on what the experience feels like and there are significant socio-cultural pressures on its expression. Self-reported sexual desire can be assessed either within global sexual function questionnaires or with measures that focus exclusively on desire. Among the existing validated measures of sexual desire, it is clear that desire (and lack of desire) is conceptualized in different ways. This creates a problem with consistency of assessment, which has obvious implications for determining the prevalence of desire problems.

Global sexual function questionnaires typically assess sexual desire using two or three questions that assess the frequency and intensity of desire or of events that purportedly indicate desire. For example, the Female Sexual Function Index (FSFI; Rosen et al, 2000), the gold standard of female sexual function assessment, focuses on the frequency and intensity of "feeling sexual desire," defined as "a feeling that includes wanting to have a sexual experience, feeling receptive to a partner's sexual initiation, and thinking or fantasizing about having sex." The Brief Interview of Sexual function for Women (BISF-W; Taylor, Rosen & Leiblum, 1994), the Derogatis Interview for Sexual Function – Short Form (DISF-SF; Derogatis, 1997), the McCoy Female Sexuality Questionnaire (MFSQ; McCoy & Matyas, 1998), and the Sexual Function Questionnaire (SFQ; Quirk et al, 2002) inquire about the frequency of sexual thoughts or fantasies and the frequency or intensity of desire for sexual activity. The BISF-W and the Male Sexual Health Questionnaire (MSQH; Rosen et al, 2004) also inquire about current level of sexual desire as compared to one month prior. These desire subscales have been found to have modest validity and reliability in comparison to other sexual function subscales (such as orgasm and sexual satisfaction), with sexual desire items loading onto sexual activity subscales instead of desire subscales (Brotto et al, 2009). However, widespread use of these measures persists, because they provide a quick way to measure desire among large numbers of men and women (Brotto et al, 2009).

Desire-specific questionnaires provide a more in-depth assessment of sexual desire and of constructs that supposedly represent desire. Many of the desire-specific questionnaires take a behavioral approach to measuring desire, in line with Levine's definition of desire as "the sum of forces that incline us toward and away from sexual

behavior." For example, the Female Sexual Desire Questionnaire (FSDQ; Goldhammer & McCabe, 2011) assesses six domains, including dyadic and solitary desire, resistance to sexual activity, relationship, sexual self-image, and concern, predominantly by investigating how often they lead to or result from sexual activity. Likewise, the Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992) consists of statements related to a desire for sexual activity, such as "My motivation to engage in sex with my partner is low," "I have a huge appetite for sex," and "I look forward to having sex with my partner." Items are scored on a five-point Likert scale from "never" to "all the time," with higher scores indicating higher sexual desire. The Sexual Interest and Desire Inventory (SIDI-F; Clayton et al, 2006) also focuses on frequency of initiation and receptivity to sexual activity, and frequency with which positive thoughts about sex lead to sexual activity. The Sexual Desire Inventory (SDI; Spector et al, 1996), on the other hand, takes a more cognitive approach to measuring desire and explores the frequency of liking sexual activity, desire in response to seeing someone attractive, and the strength of dyadic versus solitary desire.

The prevalence of sexual behavior and fantasy questions in these measures is problematic. As previously discussed, they are unreliable indicators of desire, particularly for women. Further, some measures provide participants with a definition of sexual desire (e.g., SDI; Spector et al, 1996, which states that "by desire, we mean interest in or wish for sexual activity"). Given that both men and women use a variety of indices to identify sexual desire (Brotto et al, 2009; Graham et al, 2004; Janssen, 2008), measures that include a definition that is discrepant with that of the individual will not likely result in an accurate assessment.

In an attempt to avoid the biases inherent to many standardized desire questionnaires, some researchers forego their use, opting instead to measure desire with study-specific (not standardized) questions that allow participants to apply their own meaning to the term sexual desire (e.g., Goldhammer & McCabe, 2011b). Rather than having participants rate the frequency of sexual activity or fantasy or the intensity of desire to engage in sexual behavior, they ask respondents to rate the frequency and intensity of sexual desire in accordance with the individual's definition of desire. While this does avoid the imposition of researcher-defined conceptualizations of desire, two key issues remain: 1) the assumption that individuals can count a precise number of desire experiences (as if these were discrete experiences), and 2) the fact that when individuals self-assess their levels of desire, the people or groups that they are evaluating themselves against are unknown.

The "frequency count" method is problematic because it assumes that each instance of desire is clearly demarcated by a beginning and ending point. How could participants accurately isolate experiences of desire and count them when desire is not a discrete event (such as orgasm)? It would be akin to asking someone to count how many times they have been content. These are not experiences with clearly defined boundaries.

The rating method wherein respondents are asked to rate their overall level of desire, typically on a scale from no desire to very high desire, is equally problematic. When individuals evaluate their overall level of sexual desire, their evaluation is necessarily a relative one. Are they comparing themselves to another group or to a media or societally propagated ideal of sexual desire, or perhaps to levels of desire they had in the past. In other words, when an individual judges themselves to have low desire, are

they comparing to their own desire 10 years ago, to their partner's level of desire, to all women, to all men, or to what they read in magazines and see on television? For example, in the case of couples, we know the assessment of desire tends to be relative (Bancroft, Graham, & McCord, 2001). A woman with a lower level of desire than her partner may evaluate her overall desire as low, when an equal level of desire might be interpreted as high by a different woman who does not have a desire-discrepant partner. While the issue of context in self-evaluation generalizes to other phenomena (e.g., depression or anxiety), it may be particularly important when evaluating sexual desire as it is particularly relational, gendered and socially mediated.

Sources of comparison for self-assessment

In addition to romantic/sexual partners, other sources of information on sexuality undoubtedly influence the perception of "norms", and thereby affect how an individual might appraise their overall level of desire. Particularly during adolescence and young adulthood, a combination of individual and social factors jointly influence the development of sexual selves (Plante, 2007). For example, Treboux and Busch-Rossnagel (1995) report that peer influence with regard to sexual information peaks at age 17 or 18. Though the overwhelming majority of research has focused on peer influence on adolescent females (see Baumeister, 2000; Tolman & McClelland, 2011 for reviews), boys also name peers as one of their most important sources of sexual information as well (e.g., Ballard & Morris, 1998, Bleakley, Hennessy, Fishbein, & Jordan, 2009). An abundance of data indicate that both sexual attitudes and behaviors in young men and women are influenced by their perception of peer attitudes and behavior (e.g., Brandhorst, Ferguson, Sebby, & Weeks, 2012; Epstein & Ward, 2008; Rodgers &

Rowe, 1990). Similar attention has been paid to the considerable influence of mass media on adolescent sexuality. Researchers have documented the increased prevalence of both sexual talk and sexual behavior in televised media, as well as the significant correlation between exposure to sexual media and reported sexual behavior (e.g. Brown, 2002; L'Engle, Brown, & Kenneavy, 2006; Pardun, L'Engle, & Brown, 2005).

Despite the wide interest in how different groups influence sexuality, the focus has been largely on behavior, with the discourse surrounding pleasure and desire largely neglected (Smith, 2012). Whether the demonstrated influence of various groups on sexual attitudes and behavior extends to self-assessment of sexual desire levels remains undetermined. One qualitative study raised the question of perceived "norms" with regards to sexuality, including sexual desire, in 33 women aged 19-60 (Nicolson & Burr, 2003). Data from this sample revealed that, indeed, women do perceive a standard of "normal" sexual function. The authors identified a number of origins for these standards, including the influence of information from popular media.

Social desirability in self-report

Related to the discussion of social influence on how sexuality develops is the issue of social influence on how sexuality is reported. Social desirability, the tendency of individuals to deny socially undesirable thoughts or behaviors, and admit to socially desirable ones, is most likely to occur when data are sought on attitudes or experience that run contrary to dominant social norms. A common method for investigating the potential effects of social desirability on sexuality reporting is to use a questionnaire measuring social desirability (e.g., Marlow-Crowne Social Desirability Scale: Crowne & Marlow, 1960) alongside the measure of interest and then control for the former. A

second method that has not been used as extensively in sexuality research is the bogus pipeline, which manipulates socially desirable responding through the use of a fake lie detector. Thus far, the bogus pipeline method has only been used to confirm that social desirability influences reports of sexual attitudes and behavior (Alexander & Fisher, 2003), but has not been used to assess reported sexual desire.

To the extent that men and women may be impacted by different sex-role stereotypes and perceived norms, women may be compelled to report low sex drive, while men may be expected to report high sex drive. Findings, however, are mixed. One body of research suggests that social demands do not influence reported sexual desire. In Beck, Bauzman, and Qualtrough's (1991) study of the psychological correlates of sexual desire, neither male nor female college-aged participants had a significant correlation between scores on the Marlowe-Crowne Social Desirability Scale and reported frequency of sexual desire. Similarly, Hurlbert, White, Powell, and Apt's (1993) sample of 57 women with HSDD participating in orgasm consistency training completed measures of sexual function, including the Hurlbert Index of Sexual Desire, and a measure of social desirability, with no significant correlation between the two measures. In the development of Rosen et al's (1997) International Index of Erectile Function (IIEF) and Taylor et al's (1994) Brief Index of Sexual Function in Women, no significant correlations were found between reported sexual desire and social desirability scale scores. It may be that, under anonymous testing conditions, the need to present oneself in a favorable light decreases (Paulhus, 1991). More recently, though, Boyer et al (2012) found no significant relationship between measures of social desirability and selfreported arousal to an erotic film in sexually functional women.

Some evidence does point to an impact of social desirability on responses to sexuality related questions. Interestingly, these results suggest that social expectations exert a stronger influence on reporting in women than in men. In Fisher, Moore, and Pettinger's (2012) study of the effects of social desirability, gender, and erotophilia on the frequency of sexual cognitions, 120 male and 163 female college students were randomly assigned to keep count of the frequency of thoughts related to either food, sleep, or sex. Results showed that women's, but not men's, social desirability scores were significantly negatively correlated with thoughts of sex. In Meston, Heiman, Trapnell, and Paulhaus' (1998) sample of 504 male and female college students, female participants who scored high on impression management reported lower sex drive than those with low impression management scores. Social desirability did not influence reports of sex drive in male respondents. Finally, Huberman Suschinsky, Lalumiere, and Chivers (2013) found that impression management scores significantly negatively correlated with discrete measures of self-reported sexual arousal, and with sexual desire.

This inconsistent pattern of results leaves much room for speculation regarding the relationship between social desirability and reports of sexual desire. Further research is needed with particular attention paid to situational variables during testing that may influence social desirability. Additionally, data collected using more refined methods of social desirability assessment, such as the bogus pipeline procedure, may provide different insight into the social desirability bias.

The limitations of self-report methods outlined above can compromise the accuracy of self-report, particularly in the study of sexual desire. However, unlike the permanent issues with "objective" measurement of desire (i.e., the fact that neither

physiological, behavioral, or cognitive measures reliably indicate desire), research on the process and context of self-report has the potential to make desire measurement more accurate and thus more informative.

Understanding the Distress Criterion in the Diagnosis of HSDD/SIAD

A diagnosis of HSDD or SIAD, like all sexual disorders in the DSM, necessitates a report of associated distress. That is, sexual problems that are not experienced as distressing do not rise to the level of disorders. The criterion of distress seems to be a reasonable way of differentiating what is "disordered" from what is normal variation in human sexual functioning or relational dynamics. Data reviewed thus far have highlighted the issues that interfere with an accurate conceptualization and assessment of the symptom of low desire. The distress criterion in an HSDD and SIAD assessment comes with a unique set of concerns, which will now be reviewed.

Prevalence of low desire and associated distress

As reviewed earlier, the prevalence of reported low sexual desire is approximately 30% in women and 15% in men, with slight variations depending on such factors as age of the sample and method of assessment. In studies that require that the reported low sexual desire be accompanied by distress or interpersonal difficulty, these rates change dramatically. Interestingly, this research has centered on women.

In a Swedish sample of 1,335 women aged 18-74, only 43% of those who reported decreased sexual desire viewed this as a problem (Fugl-Meyer & Fugl-Meyer, 1999). Likewise, in Oberg, Fugl-Meyer, and Fugl-Meyer's (2004) examination of data from 1,056 Swedish women aged 19-65, 29% reported manifest (experienced quite often, nearly all the time, or all the time) low desire with only 47% of this group reporting

manifest distress. Two reports from the Women's International Study of Health and Sexuality (WISHeS) study confirmed the lower prevalence of low desire plus distress, as compared with low desire alone. Leiblum, Koochaki, Rosenberg, Barton, and Rosen (2006) examined a subsample of 952 American women aged 20-70. Rates of low desire were 24-36%, varying as a function of age and menopausal status. When distress was considered, these rates dropped to 9% in naturally menopausal women, 14% in premenopausal and older surgically menopausal women, and 26% in young, surgically menopausal women. Groups in a European subsample of the WISHeS study, comprised of 2, 467 women aged 20-70, evidenced drastic differences in their reports of low desire (16-46%) versus low desire accompanied by distress (7-16%) (Dennerstein, Koochaki, Barton, & Grazziotin, 2006).

These results suggest that only about half of women who report low desire also report associated distress. This finding has led researchers to investigate what the differences might be among women who experience distress associated with low desire versus those who do not. Recent studies have highlighted the increased prevalence of personal distress among certain demographics, including premenopausal women (Rosen et al, 2009; Stephenson & Meston, 2012), women in relationships (Rosen et al, 2009), and women who report being less compatible with their partners (Witting et al, 2008).

Data on distress associated with low sexual desire in men is scarce, and it is unknown how the requirement of associated distress affects prevalence rates of HSDD in men. Derogatis et al's (2012) characterization of HSDD in men suggests that distress is indeed experience by men with low desire, to a larger degree than in men without HSDD.

The inclusion of a distress criterion has important implications for the prevalence of HSDD. Though the distress criterion has been a fixture in the DSM diagnostic system since DSM-III (APA, 1980), there is some debate regarding its appropriateness in diagnosing sexual dysfunction. Althof (2001) argues that the inclusion of personal distress detracts from the scientific rigor that researchers strive for in establishing diagnostic criteria. He suggests, for example, that a woman who has never been able to achieve orgasm in the presence of adequate sexual stimulation and sexual arousal [Criterion A for Female Orgasmic Disorder (FOD)] should nonetheless qualify for a diagnosis of FOD in the absence of distress or interpersonal difficulty (Criterion B). If the phenomena are present, Althof argues, the absence of distress should not nullify a diagnosis. He acknowledges that the inclusion of the distress criterion serves to prevent the pathologizing of normal variation in sexual function and avoid labeling men and women as "dysfunctional." However, he correctly points out that there are no established norms to delineate the range of normal sexual functioning, and thus no way to systematically evaluate sexual dysfunction based solely on symptoms.

The most commonly used validated measure of sexually-related personal distress is the Female Sexual Distress Scale [FSDS (Derogatis et al, 2002)]. The FSDS was developed following a 1999 conference on female sexual dysfunction. The purpose of this conference was to create a standardized, reliable, and functional nosological diagnostic system for diagnosing female sexual dysfunction. At that time, distress associated with sexual dysfunction was recognized as an important component of a diagnostic assessment. However there was no existing validated questionnaire to measure the presence or degree of distress. Since the development of the FSDS, a variety of

studies have assessed distress in relation to sexual desire. However, the populations selected in which to evaluate distress reflect a number of biases about who might be expected to experience distress about sexual desire and when.

Assumptions about personal distress

To date, research on distress associated with sexual desire has been biased by several assumptions, related predominantly to gender and level of desire. A notable example is the near non-existent inquiry about distress associated with low sexual desire in men as compared to women. This curious exclusion from the already small body of research on low sexual desire in men likely reflects the belief that men will necessarily be distressed if they experience low desire and not distressed if they experience high desire. This likely stems from societal messages that promote male sexual desire and behavior (i.e., the sexual double standard). A second possible explanation relates to data that suggest men have a higher sexual drive than women (Baumeister et al, 2001). If high sex drive is seen as "natural," then by default, low sex drive is assumed to be "unnatural" and therefore distressing.

The focus of research on distress associated with sexual desire has instead been on women, and specifically on women with absent or low sexual desire. Curiously, it seems that an exploration of distress is not relevant to women who experience high desire. The assumption that women's distress levels will decrease as sexual desire increases ignores the possibility of distress associated with a level of desire that might seem too high in comparison to her partner or to her impression of what is "normal" or to socially sanctioned levels of sexual desire for women. As reviewed earlier, acknowledgement and discussion of sexual desire has traditionally been quelled in young

women, with a consequent influence on how they view their own desire (Tolman, 1994). It is reasonable to expect, then, that young women who experience high desire may experience some degree of distress over something they view as "bad."

Interestingly, the language of the FSDS assumes that distress would result exclusively from low desire. Four of 12 items assess negative emotion because of "sexual problems," and one item (added in the revised FSDS) directly inquires about low desire. Therefore, the very language of the FSDS privileges the distress of women with low desire "problems" to the exclusion of women who may experience distress because of high desire which is not traditionally conceptualized as a problem, despite societal sanctions against high-desiring women.

Distress and sources of self-assessment

A person's source of self-assessment may also be related to distress about sexual desire. In regard to couples, research shows that couples often assess their level of desire relative to one another (Bancroft, Graham, & McCord, 2001), and that desire discrepancies are a frequent complaint in clinical settings (Heiman, 2001). It is thus reasonable to suspect that using a partner as the primary source of comparison for desire self-assessment leads one partner, likely the "low desire" partner, to experience some degree of distress. The same level of desire may not produce equivalent distress if compared, for example, to same-age, same-gender peers.

Other sources of self-assessment, such as peers or norms as depicted by popular culture, may influence whether or not distress is present and how it is experienced. These possibilities are unexplored in the literature, and their investigation may provide a perspective that has not been represented in our understanding of HSDD to date.

CONCLUSION

Recent questioning of the linear tri-phasic model of the sexual response has brought about important changes in our conceptualization of sexual desire and HSDD, which have been addressed to some extent in the recent DSM-5. Sexual desire is no longer considered to be exclusively a motivational drive that results in sexual action, similarly experienced in men and women. Alternative views of sexual desire acknowledge its analogousness to sexual arousal, its diverse origins and goals, its relational and sociocultural determinants, and gender differences in its expression. Attempts at measuring sexual desire objectively have thus far been unsuccessful, with physiological, cognitive, and behavioral markers poorly correlated with self-reported desire. Self-report, then, is considered the most accurate available measurement tool, though it, too, has a number of limitations. In particular, no data exists to clarify the process through which individuals evaluate their sexual desire, which leaves data on desire self-assessment without context, and thus difficult to interpret.

The specific sources of comparison that individuals use to guide their desire self-assessments may contribute to feelings about the desire levels, such as distress. There is currently very little data on why distress arises. In fact, research on distress has been biased by assumptions based on gender and level of desire, which has neglected the experience of important groups, specifically sexually "functional" women and men.

CHAPTER 3

AIMS OF THE STUDY

The present study aimed to 1) compare men and women's perception of their sexual desire levels to what they perceive to be the desire levels of other people or groups, 2) investigate the relationship between the perceived sexual desire discrepancies and other aspects of desire (desire level, satisfaction and distress with the desire level), and 3) investigate the relationship between the perceived sexual desire discrepancies and measures of sexual function, sexual self-concept, adherence to social norms, sexual distress, personality, and well-being. We did not have specific hypotheses and considered this study a preliminary exploration of the way in which men and women judge this important aspect of their sexuality, and the effect of this judgment on several aspects of sexual and general well-being.

These questions are of both theoretical and clinical relevance. Sexual desire has generally been conceptualized in a way that does not reflect the experience of most people, notably women. This is due, in part, to questionable methods of sexual desire assessment that have relied on sexual behavior, sexual cognitions, or physiological arousal, all of which are unreliable indicators of desire, especially in women. Self-report has also been problematic as there have been no efforts made to assess the context in which self-assessments are made. Exploration of context in self-reports of sexual desire has been limited to the relative assessment of couples. The results of such investigations have enhanced our understanding of sexual desire as a relational phenomenon. However, the experience of sexual desire is also gendered and socially mediated. This study aimed to extend research on relative self-assessment to account for such non-relational

influences. These questions are important in advancing our conceptualization of sexual desire, and also in adequately addressing problems related to sexual desire that present in clinical settings.

CHAPTER 4

METHODS

Participants

Participants consisted of heterosexual men and women who were recruited from the UNLV subject pool, via advertisement on the university SonaSystems website.

Inclusion criteria included being at least 18 years of age, identifying as heterosexual, and having engaged in sexual intercourse with an opposite-sex partner during their lifetime.

Participants received 1 research credit for their participation.

A total of 646 participants provided data for the study, yielding a final sample of 585 participants after 61 participants were excluded from analyses. Exclusion from analyses occurred for the following reasons: Participants did not provide sufficient data (N = 14), did not meet specified inclusion criteria (N = 23), or were higher than 2.5 standard deviations of the mean age for their gender (N = 24).

Sociodemographic characteristics of the final sample (N=585) are presented in Appendix A. T-tests on demographic and relationship variables revealed that men (N = 178) and women (N = 407) did not differ significantly with respect to age, age of first intercourse, number of lifetime sexual partners, and number of lifetime significant relationships. Chi-square tests showed no gender difference in ethnic identity. Significant gender differences emerged in religious affiliation, with more women endorsing current religious affiliation; χ^2 (6, N = 585) = 30.51, p < .001, and in relationship status, χ^2 (6, N = 585) = 22.04, p < .01, with men more likely to be single or dating multiple partners, and women more likely to be dating one partner or in a relationship.

Measures

Sociodemographic and relationship history questionnaire (Appendix B)

The sociodemographic and relationship history questionnaire was created by the researchers and was administered to all participants to gather information on age, gender, ethnicity, religious affiliation, education, sexual orientation, relationship status, number of lifetime sexual partners, age of first sexual intercourse, and number of past significant relationships (6+ months in duration).

Sexual Desire Discrepancy Scale (SDDS: Appendix C)

The SDDS was created by the researchers given that no existing measure directly addresses the extent to which individuals assess their sexual desire to be different from that of specific groups or other individuals. This questionnaire contains three stand-alone questions anchored on a 0-10 scale asking respondents to rate their overall level of desire over the past six months, as well as their satisfaction and concern or distress about their level of desire. These three questions do not form part of the discrepancy assessment. Discrepancy is assessed via a 10-item comparison scale that asks participants to compare their level of desire to their ideals and to various people and groups, on a scale anchored from -3 (much lower than) and +3 (much higher than). The comparison groups are: all women your age, all men your age, your female friends in general, your male friends in general, your closest female friend, your closest male friend, your current partner (if applicable), your last partner (if applicable), what you think it should be, and what you want it to be. The 10 comparison items (which will heretofore be referred to as the SDDS) were averaged to create a raw total discrepancy score (range being from -3 to +3), and an absolute total discrepancy score which indicates total deviation from zero (range

being 0 to 3). The raw scores indicate the direction of the discrepancy (higher or lower than comparison groups) whereas the absolute scores indicate the magnitude of discrepancy regardless of direction. Same-sex (comparison to other women for women; comparison to other men for men), opposite-sex (comparison to men for women; comparison to women for men), and should/want discrepancy subscales were also calculated in terms of both raw and absolute discrepancy scores. Internal consistency of the total SDDS was .87 for women and .84 for men, as measured by Cronbach's alpha.

Sexual Double Standard Scale (SDSS: Muehlenhard & Quackenbush, 1998: Appendix D)

The SDSS is a 26-item scale that assesses the extent to which respondents adhere to the traditional sexual double standard. The scale includes six individual items that compare women's and men's sexual behavior in the same item (e.g., "It's worse for a woman to sleep around than a man.") and 20 items that occur in pairs, with parallel items about women's and men's sexual behavior (e.g., "A girl who has sex on the first date is 'easy," and "A guy who has sex on the first day is 'easy."). Items are rated on a 4-point Likert-type scale that ranges from 0 (Disagree Strongly) to 3 (Agree Strongly). Sexual double standard scores are calculated by summing the individual item scores and the difference scores from the 10 item pairs. Scores can range from 48 (reflecting acceptance of greater sexual freedom for men than for women) to 0 (reflecting identical standards for men and women), to -30 (reflecting acceptance of greater sexual freedom for women than for men.) Internal consistency of the SDSS is acceptable, with alpha coefficients of .73 for women and .76 for men (Muehlenhard & Quackenbush, 1996). In our sample, alpha coefficients were .66 for women and .69 for men.

Multidimensional Sexual Self-Concept Questionnaire (MSSCQ: Snell, 1998: Appendix E)

The following subscales of the MSSCQ were administered to all participants: sexual self-esteem, sexual satisfaction, sexual optimism, sexual monitoring, and sexual problem self-blame. The sexual self-esteem subscale measures the individual's tendency to positively evaluate their own capacity to engage in healthy sexual behaviors and to experience their sexuality in an enjoyable way. The sexual satisfaction subscale assesses the individual's tendency to be satisfied with the sexual aspects of their life. Sexual optimism is defined as the expectation that the sexual aspects of the individual's life will be positive and rewarding in the future. Sexual monitoring is the tendency to be aware of the impression that an individual's sexuality makes on others. Finally, sexual problem self-blame assesses the individual's tendency to blame themselves when the sexual aspects of their lives are unhealthy, negative, or undesirable. Each of these subscales is comprised of five items that are answered on a 5-point Likert-type scale, with scores ranging from 0 (not at all characteristic of me) to 4 (very characteristic of me). Subscale scores are created by averaging the five subscale items, with subscale scores ranging from 0-4. The sexual esteem, sexual satisfaction, sexual optimism, sexual monitoring and sexual problem self-blame subscales have been found to have high internal consistency, with Cronbach's alpha coefficients of .88, .91, .78, .84, and .84, respectively (Snell, 1995). In our sample, alpha coefficients were .90, .90, .70, .80, and .83 in women, and .89, .89, .70, .78, and .83 in men.

Female Sexual Function Index (FSFI: Rosen et al, 2000: Appendix F)

The FSFI was administered to all female participants in order to obtain information on global sexual functioning. The questionnaire is comprised of 19 items divided into six subscales: desire, subjective arousal, lubrication, orgasm, satisfaction, and pain, with each question pertaining to one subscale. Arousal, lubrication, orgasm, and pain subscale scores range from 0 to 6, the desire subscale from 1.2 to 6, and the satisfaction subscale from 0.8 to 6, with higher scores reflecting higher sexual function. The subscales combine to yield a total score ranging from 2 to 36. The FSFI has been found to have high test-retest reliability over a four-week period (r = .70-.86) and high internal consistency (Cronbach's alpha values of .82 and higher) and acceptable discriminate validity as demonstrated by significant differences between scores of women with female sexual arousal disorder, female orgasmic disorder, hypoactive sexual desire disorder and control groups (Meston, 2003; Rosen et al, 2000). Because the Female Sexual Function Index (FSFI) assesses sexual function during sexual activity in the past four weeks, only women who endorsed having engaged in partnered sexual activity over the past four weeks (N = 285) were included in analyses. In this sample, Cronbach's alpha was .96.

International Index of Erectile Function (IIEF: Rosen et al, 1997; Appendix G)

The IIEF was administered to all male participants in order to obtain information on global sexual functioning. The questionnaire is comprised of 15 items divided into five subscales: erectile function, orgasmic function, sexual desire, intercourse satisfaction, and overall satisfaction. The erectile function subscale ranges from 0 to 30, intercourse satisfaction ranges from 0-15, and orgasmic function, sexual desire, and

overall satisfaction range from 0-10, with higher scores reflecting higher sexual function. The subscales combine to yield a total score ranging from 0 to 75. Internal consistency has been found to be high for the erectile and orgasmic function scales (alpha = .90) and satisfactory in the other three domains (alpha = .70 and greater). Test-retest reliability for administrations four weeks apart were high for total scores (r = .82) and moderate to high on individual subscales (r = .64-.84), and acceptable discriminant validity, as demonstrated by its ability to differentiate between men with and without reported sexual dysfunction (Rosen et al, 1997). Because the International Index of Erectile Function (IIEF) assesses sexual function during sexual activity in the past four weeks, only men who endorsed having engaged in partnered sexual activity over the past four weeks (N = 111) were included in analyses. In our sample, internal consistency was moderate to high for all subscales (Erectile = .85; Orgasmic function = .87; Desire = .79, Intercourse satisfaction = .91; Overall satisfaction = .78).

The Sexual Distress Scale (SDS: Adapted from the Female Sexual Distress Scale, Derogatis et al, 2008: Appendix H)

The Sexual Distress Scale was adapted from the Female Sexual Distress Scale (FSDS). The FSDS has been validated for use with women. The SDS consists of the original 12 items on the FSDS, with items 3, 4, 6, and 10 adapted to eliminate language related to sexual "problems," in order to be relevant for men and women who may be concerned about a level of sexual desire without officially labeling it a problem. In each of these items, the phrase "sexual problems" was modified to "some aspect of your sexual function." For example, item 3 on the FSDS, "How often did you feel guilty about your sexual problems?" reads "How often did you feel guilty about some aspect of your

sexual function?" Each item is answered on a 0 (never) to 4 (always) scale, with a total score created by summing the individual items. The FSDS has been demonstrated to have high internal consistency (alpha = .86 and higher; Derogatis, 2008) and high test-retest reliability between administrations four weeks apart (r = .80-.92; Derogatis, 2008). In our sample, internal consistency of the SDS was .92 in both women and men.

The Satisfaction With Life Scale (SWLS: Diener, Emmons, Larsen & Griffin, 1985)

The Satisfaction With Life Scale (SWLS: Diener, Emmons, Larsen & Griffin, 1985: Appendix I)

The SWLS is a brief 5-item instrument designed to measure global life satisfaction. Each item is rated on a 1 (Strongly Disagree) to 7 (Strongly Agree) scale, and they are summed to create a total score. Sample items include "In most ways my life is close to my ideal" and "If I could live my life over, I would change almost nothing." This scale has high test-retest reliability over a two-month period (r = .82) and strong internal consistency (alpha = .87; Diener, Emmons, Larsen, & Griffin, 1985). In our sample, coefficient alpha was .88 in women and .86 in men.

The Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003: Appendix J)

The Ten-Item Personality Inventory is a brief instrument designed to measure the Big Five personality dimensions. Two items comprise each of the following five subscales: Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experiences. Each item is rated on a 1 (Disagree Strongly) to 7 (Agree Strongly) scale. Internal consistency was not calculable in this sample as each scale contains only two items. It should be noted that high internal consistency was not the authors' goal in creating this measure. Rather, it is intended to be a highly valid measure,

and indeed demonstrates good convergent and discriminant validity with other measures of personality (Gosling, Rentfrow, & Swann, 2003).

Missing Data

Cases included in analyses 1) provided an overall desire level, 2) were missing responses to no more than one desire discrepancy item (excluding the two optional partner comparisons) and 3) had no more than 8% missing data on any one measure, with the exception of the 5-item Satisfaction With Life Scale, for which participants missing one value (20%) were included. As a general note on the entire data set, no single participant included in analyses evidenced greater than five missing data points across measures. For participants missing responses to less than the aforementioned percentage of items, within-gender mean or within-scale mean substitution was applied, as appropriate.

For participants who did not have a current or past partner, items related to partners in all questionnaires were coded as not applicable and total scores were prorated. Six such items appeared in the questionnaire set as follows: items 7 and 8 on the Sexual Desire Discrepancy Scale, item 2 on the Sexual Distress Scale, Items 14 and 15 on the Female Sexual Function Index, and Item 14 on the International Index of Erectile Function.

It should be noted that no single variable, with the exception of the "not applicable" items noted above, evidenced greater than five per cent missing data, and thus the techniques employed to manage missing data had little influence on the outcome of the analyses.

Procedure

Formal approval for this study was obtained from the Institutional Review Board at the University of Nevada, Las Vegas. Participants were recruited via Sona Systems, and subsequently completed informed consent and study questionnaires on a secure data collection site, Qualtrics. Participants received 1 research credit for enrolling in the study. The Sociodemographic and Relationship History Questionnaire and the SDDS were presented first, with the remaining measures then presented in random order. The SDDS was presented first in order to obtain a rating of sexual desire that was not influenced by definitions of sexual desire that were presented on the sexual function questionnaires.

CHAPTER 5

RESULTS

The presentation of results will be conducted in the following order: we will first briefly review separate principal components analyses of the SDDS for women and men as a preliminary investigation of its psychometric properties. We will then present the results of analyses 1) comparing the desire levels, desire satisfaction and desire distress of men and women; 2) comparing the perceived desire discrepancies of men and women; 3) investigating the relationship of these discrepancies to other aspects of desire (level, satisfaction, and distress) and finally; 4) investigating the relationship of discrepancy scores to broader aspects of sexuality (sexual function, sexual distress, sexual double standard beliefs, and sexual self-concept) and life satisfaction and general personality traits. Across analyses, Type I error was controlled using the Bonferroni-Holm correction. One correction procedure was conducted on t-tests within the SDDS. For correlational analyses within the SDDS, separate correction procedures were conducted for men and women on correlations between discrepancy and desire level, satisfaction, and distress with desire. For the secondary measures, correction procedures for each gender were conducted on all correlations associated with total discrepancy, and each subscale discrepancy.

Principal Components Analysis of the SDDS

Responses to the 10-item SDDS were subjected to an exploratory principal components analysis with direct oblimin rotation, separately for each gender. Criteria for component retention were eigenvalues greater than one and Scree plot analysis. Items

were said to load on a given component if the component loading was .30 or greater on that component, and was less than .30 on the other components.

All female participants (N = 407) were included in the principal component analysis. Tests of sampling adequacy indicated an adequate overall sample size and adequate number of cases per item. Table 1 presents item loadings and eigenvalues for the extracted components. Three components displayed eigenvalues greater than 1.00 accounting for 72% of the variance, and the results of a Scree plot analysis similarly indicated that three components were meaningful. Thus, three components were retained for rotation. Six items loaded onto the first component (five exclusively) which was subsequently labelled the "opposite sex discrepancy" component. Two items loaded on the second component, which was labelled the "should/want discrepancy" component. Three items loaded onto the third component (two exclusively) which was labelled the "same sex discrepancy" component. Though this component had only two items, which falls below the recommended minimum of three items per component (Spector, 1992), it was interpreted due to the exploratory nature of the study.

Table 1. SDDS Component Eigenvalues and Item Loadings Following Oblimin Rotation for Female Participants

Item	Co	mponent l	Loading	Communality
	1	2	3	
Women your age	.45	.09	53	.72
Men your age	.79	01	19	.77
Your female friends	.13	.06	83	.83
Your male friends	.79	06	23	.79
Your Closest female friend	06	.13	87	.79
Your Closest male friend	.73	10	23	.68
Your Current partner	.73	.20	.23	.57
Your Last partner	.74	.00	.10	.50
What you think it should be	.06	.76	22	.75
What you want it to be	04	.93	.03	.83
Component Eigenvalue	4.90	1.28	1.04	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

All male participants (N = 178) were included in the principal component analysis. Although the Kaiser-Myer-Olkin measure of sampling adequacy and Bartlett's test of sphericity indicated sampling adequacy, results of this analysis should be interpreted with caution given the small sample size.

Table 2 presents component loadings and eigenvalues for the extracted components. Three components displayed eigenvalues greater than 1.00 accounting for 68% of the variance. The results of a Scree plot analysis similarly indicated that three components were meaningful. Therefore, the first three components were retained for rotation. Five items loaded onto the first component, which was subsequently labelled the "opposite sex discrepancy" component. Three items loaded on the second component, which was labelled the "same sex discrepancy" component. Two items loaded onto the

third component which was labelled the "should/want discrepancy" component. This component was again interpreted due to the exploratory nature of the study. Component inter-correlations for men and women are displayed in Table 3.

Table 2. SDDS Component Eigenvalues and Item Loadings Following Oblimin Rotation for Male Participants

Item	Comp	onent L	oading	Communality
	1	2	3	
Women your age	.88	.02	.03	.77
Men your age	.02	90	05	.80
Your female friends	.91	.07	03	.75
Your male friends	.00	92	.01	.88
Your Closest female friend	.86	.02	07	.69
Your Closest male friend	03	87	.04	.76
Your Current partner	.58	16	00	.46
Your Last partner	.33	06	.16	.20
What you think it should be	.19	09	.74	.74
What you want it to be	10	.05	.95	.82
Component Eigenvalue	4.37	1.32	1.18	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Table 3. SDDS Component Correlations for Women and Men

Women	SS	OS	S/W
SS	1.00		
OS	39	1.00	
SW	44	.32	1.00
Men	SS	OS	S/W
SS	1.00		
OS	50	1.00	
SW	31	.33	1.00

Note: SS = Same-Sex Discrepancy; OS = Opposite-Sex Discrepancy

S/W = Should/Want Discrepancy

Gender Differences in Self-Assessed Desire Level, Desire Level Satisfaction and Desire Level Distress

T-tests were conducted to investigate gender differences in self-assessed desire level, as well as satisfaction and distress with the desire level. Equal variances were not assumed given the difference in group sample sizes. The only significant difference observed was a higher desire level in men; t(337) = 3.21, p < .01 (See Table 4).

Table 4. Gender Differences in Desire Level, Satisfaction and Distress with Desire Level

	Gender								
		Men		,	Women	1			
	M	SD	N	M	SD	N	T	Df	d
Desire Level	7.17	1.79	178	6.65	1.78	407	3.21**	337	.29
Desire Satisfaction	7.02	2.31	178	6.96	2.44	407	.29	355	.02
Desire Distress	2.55	2.53	178	2.65	2.72	407	40	363	.05

^{**}p < .01.

Gender Differences in Perceived Desire Discrepancies

Given the exploratory nature of this study, individual items were tested for gender differences using raw scores. At the item level, significant gender differences in desire discrepancies were observed throughout, with the exception of "female friends" and "closest female friend." The remaining eight items were significantly different between men and women at at least p < .01, with t-scores ranging from 2.77 to 6.92 (See Table 5).

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Table 5. Gender Differences in Item Discrepancies of the SDDS.

				Gender					
		Men			Women		_		
	M	SD	N	M	SD	N	t	df	d
All women your age	.85	1.31	178	.28	1.21	407	4.99***	317	.42
All men your age	03	1.32	178	87	1.40	407	6.92***	356	.60
Female friends	.64	1.35	178	.34	1.41	407	2.47	351	.21
Male friends	11	1.26	178	83	1.37	407	6.31***	373	.56
Closest female friend	.49	1.48	178	.28	1.57	407	1.53	357	.14
Closest male friend	04	1.32	178	65	1.45	407	5.01***	369	.46
Current partner	.61	1.51	99	13	1.26	293	4.34***	147	.51
Last partner	.44	1.45	152	42	1.66	337	5.86***	331	.54
Think it should be	.32	1.07	178	.04	1.28	407	2.77**	402	.23
Want it to be	.29	1.14	178	13	1.15	407	4.03***	340	.36

^{**} *p* < .01 *** *p* < .001.

The items were averaged to create a raw total discrepancy score as well as an absolute discrepancy score. Same-sex, opposite-sex, and should/want discrepancy subscales were also calculated in terms of raw and absolute scores. Table 6 presents the results of these analyses.

In terms of total discrepancy, there were significant gender differences in raw scores. Men reported significantly higher desire relative to all comparison groups combined than did women; t(376) = 6.89, p < .001. However, absolute scores showed no significant differences. In terms of the same-sex discrepancy subscale, raw discrepancy scores for women were significantly higher than those for men t(354) = 3.41, p < .001, indicating that women assessed themselves to have higher desire than other women while men assessed themselves to have slightly lower desire than other men. Same sex absolute scores also evidenced a significant gender difference such that women perceived a significantly larger discrepancy with same-sex groups than did men; t(307) = 3.03, p <.01. In terms of the opposite sex discrepancy subscale, raw scores were significantly higher for men than for women; t(363) = 12.50, p < .001, indicating that men assessed their desire to be higher than that of women, while women assessed their desire to be lower than that of men. There were no significant differences in opposite sex scale absolute scores. Finally, in terms of the should/want discrepancy subscale, raw scores were significantly higher for men than for women; t(375) = 3.86, p < .001, indicating that men perceive their desire to be higher than they think it should be or want it to be, while women perceived their desire as slightly lower than they think it should be or want it to be. There were no significant gender differences in absolute discrepancy on this subscale.

Table 6. Gender Differences in Raw and Absolute Discrepancy Scores

		Gender						
		N	M en	Wo	Women			
	-	M	SD	M	SD	t	df	D
Total Discrepancy	Raw	.34	.86	21	.96	6.89***	376	.60
	Absolute	.99	.52	1.07	.54	1.70	350	.26
Same-Sex Discrepancy	Raw	06	1.16	.30	1.22	3.41***	354	.37
	Absolute	.84	.85	1.06	.76	3.03**	307	.26
Opposite-Sex Discrepancy	Raw	.62	1.06	60	1.15	12.50***	363	1.00
	Absolute	1.20	.67	1.19	.74	.11	368	.01
Should/Want Discrepancy	Raw	.30	.96	04	1.08	3.86***	375	.35
	Absolute	.75	.76	.80	80	.71	354	.06

p < .01 *** p < .001

Relationships Between Desire Discrepancies and Other Aspects of Desire

Desire Level. In an effort to understand how desire level relates to desire discrepancies,

correlational analyses were conducted between desire level and discrepancy scores.

In women, desire level was significantly positively correlated with raw total discrepancy scores (r = .64), with the same-sex discrepancy subscale (r = .57), opposite-sex discrepancy subscale (r = .56), and should/want discrepancy subscale (r = .39) at the p < .001 level. At the item level, women's desire level was significantly positively correlated with discrepancy with all ten comparison groups, with correlations ranging from .27 to .65, all significant at the p < .001 level (See Table 7).

Men's desire level was also significantly positively correlated with raw total discrepancy scores (r = .57), and both the same-sex discrepancy subscale (r = .53) and opposite-sex discrepancy subscale (r = .46) at the p < .001 level. The should/want discrepancy subscale was also correlated with desire level (r = .31) at the p < .01 level. At the item level, men's desire level was significantly positively correlated with all ten comparison groups, with correlations ranging from .16 to .50, significant at at least the p < .05 level (see Table 7). This suggests, as might be predicted, that when individuals perceive their desire to be high, they view it as high relative to others.

Table 7. Correlations Between Desire Level and Discrepancy Scores

	Desire Level		
	Men	Women	
Total Discrepancy (Raw)	.57***	.64***	
Same-Sex Discrepancy (Raw)	.53***	.57***	
Opp-Sex Discrepancy (Raw)	.46***	.56***	
Should/Want Discrepancy (Raw)	.31**	.39***	
All women your age	.45***	.65***	
All men your age	.50***	.56***	
Female friends	.37***	.47***	
Male friends	.49***	.51***	
Closest female friend	.32***	.39***	
Closest male friend	.43***	.46***	
Current partner	.37***	.38***	
Last partner	.20*	.35***	
Think it should be	.40***	.42***	
Want it to be	.16*	.27***	

p < .05 p < .01 p < .01 p < .001

In order to further understand the relationship of desire discrepancy and desire level, regression analyses were conducted on the individual discrepancy items as predictors of desire level in both women and men. In both genders, the assumptions inherent to multiple regression including normality, linearity, and homogeneity of variance were evaluated and determined to be acceptable.

Two hundred and twenty nine female participants responded to all discrepancy items and were thus included in the present analysis. The regression was significant, F

(10, 218) = 18.67, p < .001, indicating that desire discrepancy across the 10 items accounted for a significant proportion of the variance (44%) in desire level, with "all women your age" emerging as the strongest predictor of desire level (see Table 8). In other words, women's comparison of themselves to other women their age was most predictive of their desire level.

Table 8. Comparison Items as Predictors of Desire Level in Women

Comparison Item	В	SEB	В
All women your age	6.77	.12	.41***
All men your age	.24	.12	.18*
Female friends	.15	.11	.12
Male friends	03	.13	02
Closest female friend	06	.09	06
Closest male friend	01	.09	01
Current partner	.06	.08	.05
Last partner	.05	.06	.05
Think it should be	.15	.10	.10
Want it to be	.03	.10	.02

Note. Adjusted $R^2 = .44$ (n = 229), p < .001

Seventy-eight male participants responded to all items and were included in the present analysis. The regression was significant, F(10, 67) = 5.01, p < .001, indicating that desire discrepancy across the 10 items accounted for a significant proportion of the variance (34%) in desire level, with "your male friends, in general" emerging as the strongest predictor of desire level. (see Table 9). In other words, men's comparison of themselves to their male friends was the most predictive of their desire level.

p < .05, ***p < .001

Table 9. Comparison Items as Predictors of Desire Level in Men

Comparison Item	В	SEB	В
All women your age	.35	.24	.27
All men your age	.15	.23	.10
Female friends	04	.24	03
Male friends	.65	.29	.41*
Closest female friend	13	.18	10
Closest male friend	.03	.20	.02
Current partner	06	.16	05
Last partner	.08	.14	.06
Think it should be	.24	.23	.14
Want it to be	.01	.19	.00

Note. Adjusted $R^2 = .34$ (n = 78), p < .001

Given that desire discrepancy and desire level were highly correlated in both genders, all subsequent analyses of desire discrepancy include desire level as a covariate. The intent is to investigate desire discrepancies and their relationship to other variables, independent of desire level.

Satisfaction with desire level. Analyses exploring the relationship of desire level satisfaction to desire discrepancy were conducted with partial correlations, controlling for desire level. In both men and women, desire level satisfaction as measured by the SDDS was significantly and negatively correlated with absolute total discrepancy but not with raw discrepancy. This appeared specifically related to absolute discrepancy in the should/want discrepancy subscale. In other words, larger discrepancy from what men and women think their desire should be or what they want it to be, regardless of discrepancy direction, is related to decreased satisfaction with the desire level. (see Table 10).

^{*}p < .05

Direction of discrepancy did play a role with one particular comparison item. In women, satisfaction with desire level was positively correlated with current partner discrepancy at p < .001. In other words, women were more satisfied with desire levels that they perceived to be higher than that of their current partner (See Table 10).

Table 10. Partial Correlations Between Satisfaction with Desire Level and Discrepancy Scores

		Satisfaction with Desire		
	_	Male	Female	
Total Discrepancy	Raw	.08	.12	
	Absolute	32***	28 ***	
Same-Sex Discrepancy	Raw	.08	02	
	Absolute	08	08	
Opp-Sex Discrepancy	Raw	.10	.13	
	Absolute	18	10	
Should/Want Discrepancy	Raw	08	.15	
	Absolute	55 ***	5 6***	
Item Discrepancies	All women your age	.07	.06	
	All men your age	.06	.12	
	Female friends	.14	04	
	Male friends	.08	.07	
	Closest female friend	.11	04	
	Closest male friend	.07	.07	
	Current partner	.13	.21***	
	Last partner	02	.09	
	Think it should be	05	.13	
	Want it to be	08	.13	

^{***}p < .001

Distress with desire level. Partial correlations were run on discrepancy scores and distress with desire level as measured by the SDDS. In men and women, desire level distress was significantly positively correlated with absolute total discrepancy and the should/want discrepancy subscale. Thus, higher desire level distress was associated with greater discrepancy from what men and women think their desire should be or what they want it to be, with no significant influence of discrepancy direction. (See Table 11).

Table 11. Partial Correlations Between Distress with Desire Level and Discrepancy Scores

		Distress v	with Desire
		Male	Female
Total Discrepancy	Raw	.06	.00
	Absolute	.24**	.32***
Same-Sex Discrepancy	Raw	.08	.06
	Absolute	.08	.13
Opp-Sex Discrepancy	Raw	05	04
	Absolute	.05	.13
Should/Want Discrepancy	Raw	.19	.00
	Absolute	.55***	.56***
Item Discrepancies	All women your age	03	.06
	All men your age	.06	08
	Female friends	09	.05
	Male friends	.04	01
	Closest female friend	.01	.04
	Closest male friend	.10	05
	Current partner	10	13
	Last partner	04	.05
	Think it should be	.12	.01
	Want it to be	.19	01

p < .01 p < .001

Relationship Between Sexual Function and Desire Discrepancies

Means and standard deviations of Female Sexual Function Index (FSFI) subscale and total scores are presented in Table 12. In our sample, the mean total score of 28.58 is consistent with level of sexual function reported by non-clinical samples (Rosen, 2000).

Table 12. Means and Standard Deviations of the FSFI in Women (N = 285)

FSFI Domain	М	SD
Desire	4.37	1.01
Arousal	4.97	1.04
Lubrication	5.31	1.03
Orgasm	4.39	1.54
Satisfaction	4.85	1.23
Pain	4.70	1.57
Total Score	28.58	5.07

After controlling for desire level, FSFI scores were significantly negatively correlated with absolute total discrepancy (p < .01) and absolute should/want discrepancy (p < .001) (See Table 13). Thus, larger desire discrepancy from what women think their desire should be or what they want it to be, regardless of direction, is related to lower sexual function in women.

Table 13. Partial Correlations Between FSFI Scores and Discrepancy Scores in Women (N = 285)

		FSFI Total Score
Total Discrepancy	Raw	00
	Absolute	19 **
Same-Sex Discrepancy	Raw	07
	Absolute	02
Opposite Sex Discrepancy	Raw	.00
	Absolute	13
Should/Want Discrepancy	Raw	.02
** 04 ***	Absolute	23***

p < .01 + p < .001

Means and standard deviations of International Index of Erectile Function (IIEF) subscale and total scores are presented in Table 14. In our sample, IIEF scores were consistent with scores observed in non-clinical samples (Rosen et al, 1997).

Table 14. Means and Standard Deviations of the IIEF (N = 111)

IIEF Domain	M	SD
Erectile Function	26.45	6.33
Orgasmic Function	8.60	2.08
Sexual Desire	7.76	1.64
Intercourse Satisfaction	10.74	3.65
Overall Satisfaction	7.79	1.99
Total Score	61.59	11.50

There were no significant correlations observed between IIEF domain or total scores and discrepancy scores (See Table 15). Thus, there does not appear to be a significant relationship between sexual function and desire discrepancies in men after controlling for desire level.

Table 15. Partial Correlations Between IIEF Scores and Discrepancy Scores in Men (N =111)

		IIEF Total Score
Total Discrepancy	Raw	.15
	Absolute	10
Same-Sex Discrepancy	Raw	.05
	Absolute	07
Opposite-Sex Discrepancy	Raw	.18
	Absolute	03
Should/Want Discrepancy	Raw	.08
	Absolute	14

Relationship Between Global Sexual Distress and Desire Discrepancies

Scores on the Sexual Distress Scale (SDS) were not significantly different between men (M = 12.66, SD = 8.72) and women (M = 12.72, SD = 9.40), with both genders reporting low sexual distress. Women's SDS scores were significantly positively

correlated with absolute total (r = .30), absolute same-sex (r = .15), and absolute should/want (r = .44) discrepancy after controlling for desire level. In other words, higher sexual distress was related to larger discrepancies, in particular with other women and with what think it should be or want it to be, with no notable influence of direction of discrepancy. In men, higher sexual distress was related to larger discrepancy from the should/want subscale (r = .35) See Table 16.

Table 16. Partial Correlations Between SDS Scores and Discrepancy Scores

		Sexual Di	istress Scale
		Women	Men
		(N = 407)	(N = 178)
Total Discrepancy	Raw	.04	.07
	Absolute	.30***	.12
Same-Sex Discrepancy	Raw	.12	.09
	Absolute	.15**	06
Opposite Sex Discrepancy	Raw	02	.02
	Absolute	.13	.05
Should/Want Discrepancy	Raw	.03	.07
** 01 ***	Absolute	.44***	.35***

^{**}p < .01 *** p < 001

Relationship Between Sexual Double Standard Attitudes and Desire Discrepancies

On the Sexual Double Standard Scale (SDSS), men's total score (M = 10.97, SD = 6.76) was significantly higher than women's (M = 8.09, SD = 5.05); t(267) = 5.09, p < .001, indicating that men support the sexual double standard to a greater extent than do women. However, neither gender evidenced significant correlations between these attitudes and sexual desire discrepancies (See Table 17).

Table 17. Partial Correlations Between SDSS Scores and Discrepancy Scores

		Sexual Double	Standard Scale
		Women	Men
		(N = 407)	(N = 178)
Total Discrepancy	Raw	08	.03
	Absolute	.02	03
Same-Sex Discrepancy	Raw	13	.05
	Absolute	06	14
Opposite Sex Discrepancy	Raw	08	.04
Discrepancy	Absolute	.09	.06
Should/Want Discrepancy	Raw	.09	05
	Absolute	03	.02

Relationship Between Sexual Self-Concept and Desire Discrepancies

Means and standard deviations for the Sexual Esteem, Sexual Satisfaction, Sexual Monitoring, Sexual Optimism, and Sexual Problem Self-Blame subscales of the Multidimensional Sexual Self-Concept Questionnaire in women and men are presented in Table 18. Men scored significantly higher than women on Sexual Problem Self-Blame; t(364) = 5.72, p < .001 and women scored significantly higher than men on Sexual Satisfaction; t(364) = 2.67, p < .01. No other significant gender differences were observed.

Table 18. Means and Standard Deviations of MSSCQ Subscales

	Women		Me	en			
	(N = 4)	407)	(N=1)	178)			
	M	SD	M	SD	t	df	d
Sexual Esteem	2.61	1.00	2.42	.95	2.22	357	.20
Sexual Satisfaction	2.50	1.09	2.26	1.01	2.67**	364	.24
Sexual Monitoring	1.62	.97	1.68	.91	.71	359	.06
Sexual Optimism	2.82	.79	2.76	.73	.76	359	.07
Sexual Problem	1.69	1.03	2.19	.95	5.72***	364	.52
Self-Blame							

p < .001

Table 19 presents the partial correlations between MSSCQ subscales and discrepancy scores in men and women. In women, significant correlations were observed between absolute total discrepancy scores and sexual satisfaction, sexual optimism, and

sexual monitoring subscales. These subscales all evidenced significant correlations with the should/want discrepancy subscale, as did sexual self-esteem. The relationship between discrepancy and sexual monitoring also appeared notable in comparison to other women, shown through a significant correlation with same-sex absolute discrepancy. In men, discrepancy in the should/want subscale was significantly negatively correlated with sexual esteem, sexual satisfaction, and sexual optimism. Thus, greater desire discrepancy, particularly from what men and women think it should be or want it to be, is related to lower general sexual satisfaction, decreased expectation that sexual aspects of life will be positive in the future, lower sexual esteem, and increased self-consciousness about sexuality in women.

Table 19. Partial Correlations Between MSSCQ Subscale Scores and Discrepancy Scores

		Women						Men					
		SE	Sat	Mon	Opt	SPSB	SE	Sat	Mon	Opt	SPSB		
Total Discrepancy	Raw	06	02	.03	01	07	10	09	.07	00	00		
	Absolute	09	18***	.17***	21***	.11	10	06	.08	06	01		
Same-Sex Discrepancy	Raw	11	10	.01	08	06	.01	.00	.09	03	06		
	Absolute	.02	07	.16**	11	.07	.02	.13	.06	.04	10		
Opposite Sex Discrepancy	Raw	.01	.03	.03	.01	05	15	12	00	.03	.01		
- •	Absolute	07	10	.06	11	.09	09	07	00	01	.04		
Should/Want Discrepancy	Raw	09	01	.04	.01	03	05	07	.10	02	.07		
-	Absolute	19 ***	32***	.15**	28***	.09	22**	30 ***	.14	24**	.05		

^{**}p < .01 ***p < .001

Note. SE = Sexual Esteem, Sat = Sexual Satisfaction, Mon = Sexual Monitoring, Opt = Sexual Optimism, SPSB = Sexual Problem Self-Blame.

Relationship Between Life Satisfaction and Desire Discrepancies

There was no significant difference observed between men (M = 23.31, SD = 6.86) and women (M = 23.67, SD = 6.73) on life satisfaction, with both genders reporting scores in the "slightly satisfied" range. Table 20 presents correlations between SWLS scores and desire discrepancy scores. Women evidenced a significant negative partial correlation between SWLS scores and absolute total discrepancy and should/want discrepancy. There was also a negative correlation between SWLS scores and raw same-sex discrepancy scores. Thus, larger desire discrepancy from what desire should be, or desire that is perceived as higher than other women, was related to lower overall life satisfaction. Life satisfaction was negatively correlated with absolute discrepancy from the should/want subscale in men.

Table 20. Partial Correlations Between SWLS Scores and Discrepancy Scores

		SWLS T	Total Scores
		Women	Men
Total Discrepancy	Raw	09	09
	Absolute	17 ***	05
Same-Sex Discrepancy	Raw	16 **	03
	Absolute	13	.11
Opposite Sex Discrepancy	Raw	.00	06
	Absolute	06	05
Should/Want Discrepancy	Raw	08	15
** ***	Absolute	21***	27***

p < .01, *p < .001

Relationship Between Personality Traits and Desire Discrepancies

Means and standard deviations of the Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness subscales of the Ten-Item Personality Inventory are displayed in Table 21. Women scored significantly higher than men on Agreeableness; t(353) = 3.65, p < .001 and Conscientiousness; t(342) = 2.61, p < .01, and men scored significantly higher than women on Emotional Stability; t(359) = 7.15, p < .001.

Table 21. Means and Standard Deviations of TIPI Subscales

	Wor (N =			Men $(N=178)$			
	M	SD	M	SD	t	Df	d
Extraversion	4.54	1.51	4.38	1.36	1.32	373	.11
Agreeableness	4.83	1.15	4.47	1.06	3.65***	353	.33
Conscientiousness	5.53	1.17	5.26	1.16	2.61**	342	.24
Emotional Stability	4.20	1.35	5.03	1.25	7.15***	359	.65
Openness	5.41	1.16	5.33	1.07	.76	363	.07

p < .01 + p < .001

Table 22 shows correlations between TIPI subscales and desire discrepancy scores. In women, a significant negative correlation was found between Conscientiousness and total raw (r = -.16) and opposite sex raw (r = -.15) discrepancy scores. This suggests that women who are more conscientious are more likely to perceive

their desire to be lower than other men. Emotional stability was significantly negatively correlated with absolute total (r = -.21), absolute opposite sex discrepancy (r = -.17), and absolute should/want discrepancy (r = -15). This suggests that higher perceived sexual desire discrepancy from men and what women think their desire should be or what they want it to be is related to lower emotional stability. No significant partial correlations were observed in men.

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Table 22. Partial Correlations Between TIPI Subscales and Discrepancy Scores

			•	Women					Men		
	_	Е	A	С	О	ES	Е	A	С	О	ES
Total Discrepancy	Raw	.02	.03	16**	.02	.02	03	02	02	09	.07
	Absolute	05	11	02	03	21**	11	13	17	.05	08
Same-Sex Discrepancy	Raw	01	03	14	01	08	02	02	.02	04	.07
	Absolute	.00	07	03	.01	11	16	10	09	.08	05
Opposite Sex	Raw	.02	.08	15**	.00	.09	.01	.04	.00	08	.08
Discrepancy	Absolute	07	07	.05	05	17 **	12	06	13	.06	02
Should/Want Discrepancy	Raw	.01	.01	08	.04	01	.07	14	12	10	03
	Absolute	08	06	11	01	15**	.10	09	18	10	15

^{**} *p* < .01

Note. E = Extraversion, A = Agreeableness, C = Conscientiousness, O = Openness to Experience, ES = Emotional Stability

CHAPTER 6

DISCUSSION

Overview of findings

As expected, men reported higher sexual desire than did women, although there were no gender differences in satisfaction (generally high) and distress (generally low) with desire level. In terms of perceived discrepancies, men perceived their desire to be higher overall than comparison groups, as opposed to women who perceived their desire to be lower overall than comparison groups. More specifically, both men and women perceived their desire to be higher than that of other women and lower than that of other men. Men's desire was slightly higher than what they thought it should be or wanted it to be, while women's was slightly lower. Although the direction of discrepancies consistently differed for men and women, there was little difference observed in absolute discrepancy. In general, men and women who perceived their desire to be more discrepant from comparison groups were less satisfied and more distressed with their desire levels. Discrepancy from same age peers appeared to be the most predictive of self-assessed desire levels.

Desire discrepancies appeared to have negative associations for both men women. In women, larger desire discrepancies were related to lower sexual function, sexual self-esteem, sexual satisfaction, sexual optimism, life satisfaction, and emotional stability as well as to higher sexual monitoring, global sexual distress, and conscientiousness. In men, desire discrepancies were related to lower sexual self-esteem, sexual satisfaction, sexual optimism, life satisfaction, and higher sexual distress. The sexual double standard was unrelated to sexual desire discrepancies in either men or women.

Interpretation of Results

Desire and feelings about it

The levels of sexual desire reported in our sample were similar to those reported in other college samples (e.g., Seal, Bradford, & Meston, 2009) and the higher sexual desire reported by men than by women is also consistent with a well-established pattern in the literature (see Baumeister, Catanese, & Vohs, 2001 for review). Levels of satisfaction and distress with desire levels, however, have received much less research attention.

The question of how individuals feel about their desire levels is a relatively new one in non-clinical samples. While sexual satisfaction is a widely researched construct, satisfaction with desire level, specifically, is not well established. In comparison to the one validated desire instrument that assessed and reported desire level satisfaction in women (SIDI-F; Clayton et al, 2006), our sample appeared to report slightly lower desire-level satisfaction (Clayton et al, 2006); however, our mean age was lower (19.8 years old as compared to the SIDI-F mean age of 34.3). It is entirely possible that younger individuals expect higher levels of desire and are thus generally less satisfied with the desire that they have. It would be informative to investigate the interactions among desire level, perceived desire discrepancy, and desire-level satisfaction in varying age groups. For the time being, these data provide a preliminary glimpse at desire-specific satisfaction in college-aged men and women.

This study was among the first to assess desire-specific distress in a non-clinical sample, and the first, to our knowledge, to ask this question of young men in particular. As previously discussed, men have largely been excluded from research about desire

level distress due to a prevailing assumption that men with low desire would necessarily be distressed. In our sample of generally high desiring men, distress was indeed low. Interestingly, in our significantly lower-desiring female sample, distress was not significantly different from that of men's. There is limited data to serve as a comparison, as distress is generally investigated in clinical samples. In the validation study for the SIDI-F (Clayton et al, 2006), the non-clinical sample of women reported nearly nonexistent distress about desire. Though our measure used a different scale (0-10 as opposed to Clayton's 0-4), our sample appeared to report somewhat higher distress. However, our sample was asked to report on distress related to the overall desire level, while women in Clayton's study were asked to reflect on desire-level distress when they thought about, or were approached for, sexual activity. While the slightly higher distress reported by our sample may again be a function of the age difference, it is difficult to speculate given the difference in how items were worded. It is also notable that men and women in our study were asked to report their level of distress or concern about their level of sexual desire, as opposed to only distress. It may be that the word distress, in itself, implies a certain level of severity. This is certainly an area deserving of further investigation, and these data provide a preliminary look at distress over desire levels in a young community sample.

Relative sexual desire assessment: Is it primarily about peers?

The idea that individuals assess their level of sexual desire by comparing themselves to other people is not entirely new, but to date, it has been considered a process that occurs primarily in comparison to one's sexual partners (Hurlbert et al, 2000; Bancroft, Graham, & McCord, 2001). Further, research on the correlates of desire

discrepancy has focused on its relationship to relationship factors (Davies, Katz, & Jackson; 1999; Mark, 2012; Willoughby & Vitas, 2012; Willoughby, Farero, & Busby, 2014). This may be motivated by the conceptualization of sexual desire as a relational phenomenon, or by the prevalence of couple desire discrepancy complaints in clinical settings (Heiman, 2001). Because desire discrepancies often do occur in couples in a way that is distressing, researchers have identified a goal of understanding sexual desire within the context of couples (e.g., Davies et al, 1999).

However, results of the current study suggest that partners may not be the primary comparison group against which individuals assess their desire levels. Our data show that both men and women privilege comparison with peers when assessing their desire level. While partner comparison appeared to be influential (i.e., significantly correlated with self-assessed desire level), it was not as strongly correlated with desire level as comparison to peers. Comparison to peers was also a significant unique predictor in our regression models of comparison groups that predict desire level. Comparison to partners was not.

Research on sexual attitudes and behavior has long emphasized the importance of peer influence (e.g. Brandhorst, Ferguson, Sebby, & Weeks, 2012; Epstein & Ward, 2008; Tolman & McClelland, 2011). It is not surprising, then, that peers also exert considerable influence on sexual desire level assessment. These results are in line with social comparison theory (Festinger 1954) which suggests that people tend to choose comparison "targets" that are similar to themselves, in pursuit of accurate self-evaluations. Age and gender are seen as classic examples of similar targets (Guimond & Chatard, 2014 for review). Thus, while understanding sexual desire in the context of a

couple is valuable for addressing couple problems, limiting the study of desire assessment to intra- couple comparisons may miss out on the socially mediated aspect of sexual desire.

Desire discrepancy relates to sexual and non-sexual aspects of life

In line with the pervasive theme of sexual desire discrepancy as a couple phenomenon, research on correlates of sexual desire discrepancy has focused on relationship satisfaction, sexual satisfaction with the partner, relationship length, and couple conflict (e.g. Bridges & Horne, 2007; Davies et al, 1999; Mark, 2012; Willoughby & Vitas, 2012; Willoughby et al, 2014). The present study was the first to investigate the relationship of perceived desire discrepancies with intrapersonal factors. We found that perceived desire discrepancies do, in fact, relate to individual factors such as sexual self-concept, life satisfaction, sexual function, and personality in both men and women.

These individual factors were primarily related to absolute discrepancy in the should/want discrepancy subscale. As opposed to the same-sex and opposite-sex discrepancy subscales that reflect the respondent's perception of other individuals, the should/want discrepancy subscale captures the respondent's ideas about what an "appropriate" level of sexual desire is. Where exactly these ideas come from is not clear and remains a germane area for further research. Interestingly, there was only a moderate relationship between the should/want discrepancy items and items pertaining to other individuals. This suggests that men and women's ideas of what desire "should" be may be somewhat, though not entirely, based on desire levels they perceive others to have.

Sexual stereotypes for both women and men likely exert considerable influence on perceptions of appropriate desire levels. For women, contradicting messages about

acceptable sexuality may lead to pressures to exhibit levels of sexual desire that are not too low to satisfy male partners, and not so high that they are perceived as unseemly in terms of acceptable feminine norms. Evidence suggests that unrealistic standards of what women "should" be can impede their ability to develop a healthy sexuality (e.g. Impett, Schooler, & Tolman, 2006), and lead to low self-esteem and depression (e.g. Durkin & Paxton, 2002; Tolman, Impett, Tracy & Michael, 2006). Research on sexuality in young men is much more limited, and tends to focus on how sexual stereotypes impact sexual behavior or sexual attitudes as opposed to sexual desire or sexual self-concept development (Smith, Guthrie, & Oakley, 2005). Nonetheless, it is not difficult to imagine a link between masculinity stereotypes that encourage sexual behavior in young men (Zilbergeld, 1999), consequent internalized messages about expected levels of desire, and effects on sexual self-concept when their desire is discrepant from these expectations.

While men and women both evidenced negative associations with desire discrepancy, some noteworthy gender differences were observed. First, desire discrepancy appeared somewhat more consequential for women, associated with lower sexual function and emotional stability and increased sexual monitoring in addition to other facets of sexual self-concept, life satisfaction, and sexual distress that were observed across genders. This more extensive relationship between desire discrepancy and sexuality, particularly the emergence of heightened self-consciousness about sexuality, might be conceptualized as a byproduct of sociocultural messages about female sexuality discussed earlier. While social pressures on sexual desire expression affect both genders, such pressures may be more pronounced in women. It may be that, as a consequence, women have a heightened awareness about how they "measure up" against

these standards. A second noteworthy finding was that discrepancy from both same sex and opposite sex comparison groups were related to some of these constructs in women, as opposed to the unique relationship of the should/want discrepancy subscale to these factors in men. The effect of social comparison observed in women (e.g. negative associations with perceived desire discrepancy from other people) is consistent with literature that notes a more pronounced tendency towards social comparison in women than in men (Gibbons & Buunk, 1999). Women are more likely than men to understand themselves in the context of other people, whereas men tend to identify as more independent (Markus & Kitayama, 1991). Our data reflect a greater emphasis on connection with others in women, such that dissimilarity from others with respect to sexual desire level was more consequential for women. In men, being dissimilar to other people appeared to be of little consequence.

Interestingly, sexual double standard attitudes were the only construct in this study that did not emerge as related to perceived desire discrepancies in either gender. There are a couple of possibilities as to why this may be. One is that the sexual double standard may be less pervasive today, at least as assessed by this scale. The majority of items on the SDSS assess attitudes towards casual and premarital sex. In Bordini and Sperb's (2013) review of research on the sexual double standard from 2001-2010, they conclude that while the sexual double standard still exists, it may not be represented by the specific behaviors that many quantitative measures include. For example, they note that premarital sex is more widely accepted for both genders, while nontraditional sexual relationships or uncommon sexual activities are still evaluated differently for men and women. A more subtle version of the sexual double standard may exist, but it remained

untapped in the measure we employed. A second possibility is that the focus on sexual behavior in the SDSS was less relevant to relative sexual desire assessment. If there were items related to expression of sexual desire (e.g., "it is more acceptable for men to express their sexual desire" or "women should not discuss sexual desire"), a relationship with sexual desire assessment may have been more apparent. A final possibility is that the Sexual Double Standard Scale assesses attitudes about sexual practices in men and women in general, while all other questionnaires in this study assessed feelings about the self. It may be that the impact of desire discrepancy centers on intra-individual factors as opposed to beliefs about others or moral ideals.

Higher desire or lower desire: does it matter?

Research on sexual desire discrepancy tends to focus on the direction of the discrepancy. Does one individual think they have more or less desire than the other? As aforementioned, the assumption has been that having lower desire than partners is problematic. The data in this study suggest that a de-emphasis on the direction of the discrepancy may be called for. In our sample, both men and women were satisfied with desire levels that were similar to others, and became increasingly distressed and dissatisfied with desire levels that were more discrepant from others. Whether that discrepancy placed them in the higher or lower desire position did not appear to matter as much. Further, the individual factors that correlated with discrepancy in women were overwhelmingly related to absolute discrepancy (regardless of direction).

In the literature on sexual desire, low desire has traditionally been pathologized, despite the fact that half of women with self-reported low desire are actually not distressed by their desire level. Our data suggest that women who feel more similar to

others in terms of their desire are better adjusted, whether they perceive their desire to be high or low. It appears to be the perceived discrepancy that is the problem. Non-discrepant low desire may not be a problem at all. In other words, when it comes to sexual desire, having more may not necessarily be better – having as much as you perceive others to have may be ideal.

Limitations

The present study had a number of limitations. First, our sample reported a moderate to high level of sexual desire and appeared generally satisfied and minimally distressed with their desire levels. The variation in desire levels and discrepancies was not large. While this may indeed accurately represent a general college population, it may not generalize to other samples. The peer influence on desire ratings in this sample may not be as strong in older samples. It is also possible that partners may become more important in desire level assessment later in life, as a function of relationship duration and the primacy of a long-term partner in one's life.

A second limitation of our study is that we did not have a varied enough sample to conduct separate analyses based on relationship status, with the exception of the regression analyses which included only those participants who responded to all ten discrepancy items (indicating current partnership). It is possible that our results would differ among single, dating, partnered, and married individuals. It is possible that peer influence on self-assessment of desire levels would vary depending on relationship status. While certainly a question worthy of further investigation, our results suggest that peer influence is still present in partnered individuals.

Another limitation was the unequal sample sizes of our male (N = 178) and female (N = 407) groups. While the male sample size was certainly sufficient for the correlational analyses, the principal component analysis and regression analysis were underpowered and should be interpreted with caution. Additionally, a few of the correlations that were observed in men were of the same magnitude as those observed in women, but did not reach significance. It is possible that some of those correlations may have been significant with a larger sample size.

Finally, it is important to consider that the SDDS was designed for the purpose of this study and has only been preliminarily validated with the present sample. While analyses of its psychometric properties indicates that it has high internal consistency and a solid component structure for both men and women, more extensive validation is needed.

Future Directions

The present data provide an interesting foundation for future research on desire discrepancy and social comparison. First, future research could address some of the aforementioned limitations. Specifically, samples with lower desire, lower desire satisfaction, or higher desire discress may reveal a different pattern of relationships with desire discrepancy. Next, examining desire discrepancy as a function of age and relationship status would indicate whether the importance of peer group influence is a feature of a younger, less relationship stable sample, or in fact a broader trend. Whether or not peer influence extends to other age groups, exploration of how sexual desire is discussed at a peer level in younger samples is certainly warranted given the notable peer influence observed in this study.

Another area for continued research is that of perceived desire discrepancy as opposed to calculated discrepancy based on scores on a sexual desire questionnaire, as has typically been done in desire discrepancy literature. With the exception of Davies et al, (1999) who assessed perceived discrepancy with a yes/no question ("Do you and your partner have roughly similar levels of sexual desire?"), this study was the first to examine the magnitude of perceived discrepancy between self and others. If perceived discrepancy is greater than calculated discrepancy, or vice versa, research might address different influences on the development of these perceptions. Further, exploration of what actually gives people the impression that their desire level is different than that of others may prove interesting. Are these relative assessments based on comparisons of sexual behavior, of sexual attitudes, social stereotypes, or otherwise?

A third area that certainly warrants further attention is that of absolute discrepancy. Our data suggest that absolute discrepancy may in fact be a more meaningful variable than raw discrepancy. Research comparing the two may prove informative. For example, there may be specific comparison groups in which direction of discrepancy matters more. There may also be particular correlates of desire discrepancy that are strongly related to being a specifically higher or lower desiring member in a discrepant dyad. Further understanding of when discrepancy direction does and does not matter could challenge long-held assumptions about desire discrepancy. It could also inform clinical literature related to both couple factors and to individual factors, such as sexual self-concept development.

A final area of exploration offered by the present data relates to the significance of our should/want discrepancy subscale. What forms the basis for men and women to

decide that they "should" have a different level of desire? What factors make people want a different level of desire? Our data suggest some influence of comparison to others, but not a strong enough influence to neglect other potential factors at play. Qualitative research may be particularly valuable to address these questions.

Sociodemographic Characteristics of Sample (N = 585)

	Me_{N} $(N = 1)$		Women $(N = 407)$		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Age	20.43	3.28	19.8	2.6	
Age of first intercourse	16.6	2.2	16.4	1.7	
Total sexual partners	5.2	7.2	4.6	6.2	
Total significant relationships	1.7	1.2	1.9	1.3	
_	N	%	N	%	
Ethnicity					
European American	63	35.4	160	39.3	
African American	19	10.7	51	12.5	
Hispanic/Latino/Latina	38	21.3	93	22.9	
Asian/Pacific Islander	44	24.7	64	15.7	
Mixed/Other	14	7.9	39	9.5	
Religious Affiliation					
Protestant	5	2.8	12	2.9	
Roman Catholic	45	25.3	112	27.5	
Jewish	0	0.0	9	2.2	
Other Christian	34	19.1	122	30.0	
Other Non-Christian	8	4.5	9	2.2	
Atheist	26	14.6	17	4.2	
None	60	33.7	126	31.0	

Table 1 Sociodemographic characteristics of sample (N = 585) (cont'd)

	M6 (N =			men 407)
	N	%	N	%
Relationship Status				
Single, Not Dating	88	49.4	132	32.4
Dating one partner	34	19.1	115	28.3
Dating multiple partners	13	7.3	17	4.2
In a relationship, not cohabiting	28	15.7	95	23.3
Cohabiting	9	5.1	35	8.6
Married	6	3.4	11	2.7
Divorced	0	0.0	1	0.2

APPENDIX B

Sociodemographic and Relationship History Questionnaire

What is your gender? a) Female
b) Male
c) Transgender
d) Other: please specify
How would you describe your sexual orientation?
a) Heterosexual or "straight"
b) Bisexual
c) Homosexual
d) Other: please specify
What is your primary language?
a) English
b) Spanish
c) Other: please specify
What is your current relationship status?
a) single, not dating
b) dating one partner regularly
c) dating multiple partners
d) In a relationship, not cohabiting
e) Cohabiting
f) Married
g) Divorced
h) Widowed
How long have you been in this situation?
How would you classify your ethnic background?

What is your age?

a) White/Caucasian

c) Hispanic

b) Black/African American

d) Asian/Pacific Islander

- e) Native American
- f) Other

What religion do you currently follow?

- a) Protestant
- b) Roman Catholic
- c) Jewish
- d) Other Christian
- e) Other non-Christian
- f) Athiest
- g) None/NA

How old were you when you had your first experience with sexual intercourse?

How many sexual partners have you had in your lifetime?

How many significant relationships (at least 6 months duration) have you had in your lifetime?

Have you engaged in sexual activity over the past four weeks?

- a) No sexual activity
- b) sexual activity by myself only
- c) sexual activity with a partner only
- d) sexual activity by myself and with a partner

APPENDIX C

Sexual Desire Discrepancy Scale

Most people notice changes in their level of sexual desire during certain times in their lives. For example, sexual desire may increase at the beginning of a new relationship, and may decrease during periods of stress. However, most people can make an assessment of whether or not they generally have a low, moderate, or high level of sexual desire.

1. Overall, how would you describe your typical level of desire?

0	1	2	3	4	5	6	7	8	9	10
										Very
None					Moder	ate				High

Most of us have a sense of how our level of sexual desire compares to that of other people. For the next section, please assess how you think your typical level of sexual desire compares with that of the following people and groups. Estimate as best you can. Please answer every question, regardless of your gender.

2. How do you think your level of sexual desire compares to:

All women your age:

-3	-2	-1	0	1	2	3
Much lower than	Moderately lower than	Slightly lower than	Equal	Slightly higher than	Moderately higher than	Much higher than

3. How do you think your level of sexual desire compares to: All men your age: -3 -2 0 1 2 3 -1 Moderately Slightly Equal Slightly Moderately Much Much lower than lower than higher than higher than higher lower than than 4. How do you think your level of sexual desire compares to: Your female friends in general: -3 -2 0 1 3 -1 2 Much Moderately Slightly Equal Slightly Moderately Much lower than lower than higher than higher than higher lower than than 5. How do you think your level of sexual desire compares to: Your male friends in general: -3 -2 -1 0 2 3 1 Much Moderately Slightly Equal Slightly Moderately Much lower lower than lower than higher than higher than higher than than 6. How do you think your level of sexual desire compares to: Your closest female friend: 2 -3 -2 -1 0 1 3 Much Moderately Slightly Equal Slightly Moderately Much lower lower than lower than higher than higher than higher than than

7. How do you think your level of sexual desire compares to: Your closest male friend: -2 3 -3 -1 0 1 2 Moderately Slightly Slightly Moderately Much Much Equal higher than higher than higher lower lower than lower than than than 8. How do you think your level of sexual desire compares to: Your current partner (if applicable) -2 0 1 2 3 -3 -1 Much Moderately Slightly Equal Slightly Moderately Much lower than lower than higher than higher than higher lower than than 9. How do you think your level of sexual desire compares to: Your last partner (if applicable): -3 -2 -1 0 1 2 3 Moderately Much Moderately Slightly Equal Slightly Much lower lower than lower than higher than higher than higher than than 10. How do you think your level of sexual desire compares to: What you think it should be: -3 -2 -1 0 1 2 3 Moderately Slightly Slightly Moderately Much Much Equal higher lower lower than lower than higher than higher than than than

11. How	do you	think you	r level of sex	xual desire	compare	es to:			
What you	ı want i	it to be:							
-3 Much lower than		oderately ver than	-1 Slightly lower tha	-	_	tly r than	2 Moderate higher tha	•	3 Much higher than
		•	n your level						
0 Extremel Unsatisfi	-	2	3 4	5	6	7	8	9 E	10 Extremely Satisfied
To what	extent a	are you co	ncerned or d	istressed al	oout you	r level	of sexual de	esire'	?

0 1 2 3 4 5 6 7 8

Not at all Concerned/ Distressed 10

Extremely Concerned/ Distressed

9

APPENDIX D

Sexual Double Standard Scale (Muehlenhard & Quackenbush, 1996)

Disagree Strongly = 0
Disagree Mildly = 1
Agree Mildly = 2
Agree Strongly = 3

- 1. It's worse for a woman to sleep around than it is for a man.
- 2. It's best for a guy to lose his virginity before he's out of his teens.
- 3. It's okay for a woman to have more than one sexual relationships at the same time.
- 4. It's just as important for a man to be a virgin when he marries as it is for a woman.
- 5. I approve of a 16 year-old girl's having sex just as much as a 16 year-old boy's having sex.
- 6. I kind of admire a girl who has had sex with a lot of guys.
- 7. I kind of feel sorry for a 21 year old woman who is still a virgin.
- 8. A woman's having casual sex is just as acceptable to me as a man's having casual sex.
- 9. It's okay for a man to have sex with a woman he is not in love with.
- 10. I kind of admire a guy who has had sex with a lot of girls.
- 11. A woman who initiates sex is too aggressive.
- 12. It's okay for a man to have more than one sexual relationship at the same time.
- 13. I question the character of a woman who has had a lot of sexual partners.
- 14. I admire a man who is a virgin when he gets married.
- 15. A man should be more sexually experienced than his wife.
- 16. A girl who has sex on the first date is "easy".

- 17. I kind of feel sorry for a 21 year old man who is still a virgin.
- 18. I question the character of a man who has had a lot of sexual partners.
- 19. Women are naturally more monogamous (inclined to stick with one partner) than are men.
- 20. A man should be sexually experienced when he gets married.
- 21. A guy who has sex on the first date is "easy".
- 22. It's okay for a woman to have sex with a man she is not in love with.
- 23. A woman should be sexually experienced when she gets married.
- 24. It's best for a girl to lost her virginity before she's out of her teens.
- 25. I admire a woman who is a virgin when she gets married.
- 26. A man who initiates sex is too aggressive.

Appendix E

Multidimensional Sexual Self-Concept Scale (Snell, 1995): Sexual Esteem, Sexual Satisfaction, Sexual Optimism, Sexual Monitoring, and Sexual Problem Self-Blame subscales

INSTRUCTIONS: The items in this questionnaire refer to people's sexuality. Please read each item carefully and decide to what extent it is characteristic of you. Give each item a rating of how much it applies to you by using the following scale:

- A = Not at all characteristic of me.
- **B** = Slightly characteristic of me.
- C = <u>Somewhat</u> characteristic of me.
- $D = \underline{Moderately}$ characteristic of me.
- E = Very characteristic of me.

NOTE: Remember to respond to all items, even if you are not completely sure.

Your answers will be kept in the strictest confidence.

Also, please be honest in responding to these statements.

- 8. I expect that the sexual aspects of my life will be positive and rewarding in the future.
- 9. I would be to blame, if the sexual aspects of my life were not going very well.
- 10. I notice how others perceive and react to the sexual aspects of my life.
- 13. I derive a sense of self-pride from the way I handle my own sexual needs and desires.
- 14. I am satisfied with the way my sexual needs are currently being met.
- 28. I believe that in the future the sexual aspects of my life will be healthy and positive.
- 29. If the sexual aspects of my life were to go wrong, I would be the person to blame.
- 30. I'm concerned with how others evaluate my own sexual beliefs and behaviors.

- 33. I am proud of the way I deal with and handle my own sexual desires and needs.
- 34. I am satisfied with the status of my own sexual fulfillment.
- 48. I do not expect to suffer any sexual problems or frustrations in the future.
- 49. If I were to develop a sexual disorder, then I would be to blame for not taking good care of myself.
- 50. I am quick to notice other people's reactions to the sexual aspects of my own life.
- 53. I am pleased with how I handle my own sexual tendencies and behaviors.
- 54. The sexual aspects of my life are personally gratifying to me.
- 68. I will probably experience some sexual problems in the future.
- 69. If I were to develop a sexual problem, then it would be my own fault for letting it happen.
- 70. I'm concerned about how the sexual aspects of my life appear to others.
- 73. I have positive feelings about the way I approach my own sexual needs and desires.
- 74. The sexual aspects of my life are satisfactory, compared to most people's.
- 88. I anticipate that in the future the sexual aspects of my life will be frustrating.
- 89. If something went wrong with my own sexuality, then it would be my own fault.
- 90. I'm aware of the public impression created by my own sexual behaviors and attitudes.
- 93. I feel good about the way I express my own sexual needs and desires.
- 94. I am satisfied with the sexual aspects of my life.

APPENDIX F

Female Sexual Function Index (Rosen et al, 2000)

INSTRUCTIONS: These questions ask about your sexual feelings and responses during the past 4 weeks. Please answer the following questions as honestly and clearly as possible. Your responses will be kept completely confidential. In answering these questions the following definitions apply:

Sexual activity can include caressing, foreplay, masturbation and vaginal intercourse.

Sexual intercourse is defined as penile penetration (entry) of the vagina.

Sexual stimulation includes situations like foreplay with a partner, self-stimulation (masturbation), or sexual fantasy.

CHECK ONLY ONE BOX PER OUESTION.

Sexual desire or interest is a feeling that includes wanting to have a sexual experience, feeling receptive to a partner's sexual initiation, and thinking or fantasizing about having sex.

- 1. Over the past 4 weeks, how **often** did you feel sexual desire or interest?
- a. Almost always or always
- b. Most times (more than half the time)
- c. Sometimes (about half the time)
- d. A few times (less than half)
- e. Almost never or never
- 2. Over the past 4 weeks, how would you rate your **level** (degree) of sexual desire or interest?
- a. Very high
- b. High
- c. Moderate
- d. Low
- e. Very low or none at all

Sexual arousal is a feeling that includes both physical and mental aspects of sexual excitement. It may include feelings of warmth or tingling in the genitals, lubrication (wetness), or muscle contractions.

- 3. Over the past 4 weeks, how often did you feel sexually aroused ("turned on") during sexual activity or intercourse?
- a. No sexual activity
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 4. Over the past 4 weeks, how would you rate your level of sexual arousal ("turn on") during sexual activity or intercourse?
- a. No sexual activity
- b. Very high
- c. High
- d. Moderate
- e. Low
- f. Very low or none at all
- 5. Over the past 4 weeks, how confident were you about becoming sexually aroused during sexual activity or intercourse?
- a. No sexual activity
- b. Very high confidence
- c. High confidence
- d. Moderate confidence
- e. Low confidence
- f. Very low or no confidence
- 6. Over the past 4 weeks, how often have you been satisfied with your arousal (excitement) during sexual activity or intercourse?
- a. No sexual activity
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never

- 7. Over the past 4 weeks, how often did you become lubricated ("wet") during sexual activity or intercourse?
- a. No sexual activity
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 8. Over the past 4 weeks, how difficult was it to become lubricated ("wet") during sexual activity or intercourse?
- a. No sexual activity
- b. Extremely difficult or impossible
- c. Very difficult
- d. Difficult
- e. Slightly difficult
- f. Not difficult
- 9. Over the past 4 weeks, how often did you maintain your lubrication ("wetness") until completion of sexual activity or intercourse?
- a. No sexual activity
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 10. Over the past 4 weeks, how difficult was it to maintain your lubrication ("wetness") until completion of sexual activity or intercourse?
- a. No sexual activity
- b. Extremely difficult or impossible
- c. Very difficult
- d. Difficult
- e. Slightly difficult
- f. Not difficult
- 11. Over the past 4 weeks, when you had sexual stimulation or intercourse, how often did you reach orgasm (climax)?
- a. No sexual activity
- b. Almost always or always

- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 12. Over the past 4 weeks, when you had sexual stimulation or intercourse, how difficult was it for you to reach orgasm (climax)?
- a. No sexual activity
- b. Extremely difficult or impossible
- c. Very difficult
- d. Difficult
- e. Slightly difficult
- f. Not difficult
- 13. Over the past 4 weeks, how satisfied were you with your ability to reach orgasm (climax) during sexual activity or intercourse?
- a. No sexual activity
- b. Very satisfied
- c. Moderately satisfied
- d. About equally satisfied and dissatisfied
- e. Moderately dissatisfied
- f. Very dissatisfied
- 14. Over the past 4 weeks, how satisfied have you been with the amount of emotional closeness during sexual activity between you and your partner?
- a. No sexual activity
- b. Very satisfied
- c. Moderately satisfied
- d. About equally satisfied and dissatisfied
- e. Moderately dissatisfied
- f. Very dissatisfied
- 15. Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?
- a. Very satisfied
- b. Moderately satisfied
- c. About equally satisfied and dissatisfied
- d. Moderately dissatisfied
- e. Very dissatisfied

- 16. Over the past 4 weeks, how satisfied have you been with your overall sexual life?
- a. Very satisfied
- b. Moderately satisfied
- c. About equally satisfied and dissatisfied
- d. Moderately dissatisfied
- e. Very dissatisfied
- 17. Over the past 4 weeks, how often did you experience discomfort or pain during vaginal penetration?
- a. Did not attempt intercourse
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 18. Over the past 4 weeks, how often did you experience discomfort or pain following

vaginal penetration?

- a. Did not attempt intercourse
- b. Almost always or always
- c. Most times (more than half the time)
- d. Sometimes (about half the time)
- e. A few times (less than half the time)
- f. Almost never or never
- 19. Over the past 4 weeks, how would you rate your level (degree) of discomfort or pain during or following vaginal penetration?
- a. Did not attempt intercourse
- b. Very high
- c. High
- d. Moderate
- e. Low
- f. Very low or none at all

APPENDIX G

International Index of Erectile Function (IIEF; Rosen et al, 1997)

INSTRUCTIONS: These questions ask about your sexual feelings and responses during the past 4 weeks. Please answer the following questions as honestly and clearly as possible. Your responses will be kept completely confidential. In answering these questions the following definitions apply:

Sexual activity can include caressing, foreplay, masturbation and intercourse.

Sexual intercourse is defined as penile penetration (entry) of the vagina.

Sexual stimulation includes situations like foreplay with a partner, self-stimulation (masturbation), or sexual fantasy.

CHECK ONLY ONE BOX PER QUESTION

- 1. Over the past 4 weeks, how often were you able to get an erection during sexual activity?
- a. No sexual activity
- b. Almost never or never
- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always
- 2. Over the past 4 weeks, when you had erections with sexual stimulation, how often were your erections hard enough for penetration?
- a. No sexual stimulation
- b. Almost never or never
- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always

The next three questions will ask about the erections you may have had during sexual intercourse.

- 3. Over the past 4 weeks, when you attempted sexual intercourse, how often were you able to penetrate (enter) your partner?
- a. Did not attempt intercourse
- b. Almost never or never

- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always
- 4. Over the past 4, how often were you able to maintain your erection after you had penetrated (entered) your partner?
- a. Did not attempt intercourse
- b. Almost never or never
- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always
- 5. Over the past 4 weeks, how difficult was it to maintain your erection to completion of intercourse?
- a. Did not attempt intercourse
- b. Extremely difficult
- c. Very difficult
- d. Difficult
- e. Slightly difficult
- f. Not difficult
- 6. Over the past 4 weeks, how many times have you attempted sexual intercourse?
- a. No attempts
- b. 1-2 attempts
- c. 3-4 attempts
- d. 5-6 attempts
- e. 7-10 attempts
- f. 11+ attempts
- 7. Over the past 4 weeks, when you attempted sexual intercourse how often was it satisfactory for you?
- a. Did not attempt intercourse
- b. Almost never or never
- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always

- 8. Over the past 4 weeks, how much have you enjoyed sexual intercourse?
- a. No intercourse
- b. No enjoyment at all
- c. Not very enjoyable
- d. Fairly enjoyable
- e. Highly enjoyable
- f. Very highly enjoyable
- 9. Over the past 4 weeks, when you had sexual stimulation or intercourse how often did you ejaculate?
- a. No sexual stimulation/intercourse
- b. Almost never or never
- c. A few times (much less than half the time)
- d. Sometimes (about half the time)
- e. Most times (much more than half the time)
- f. Almost always or always
- 10. Over the past 4 weeks, when you had sexual stimulation or intercourse how often did you have the feeling of orgasm (with or without ejaculation)?
- a. No sexual stimulation/intercourse
- b. Almost always or always
- c. Most times (much more than half the time)
- d. Sometimes (about half the time)
- e. A few times (much less than half the time)
- f. Almost never or never

The next two questions ask about sexual desire. Let's define sexual desire as a feeling that may include wanting to have a sexual experience (for example masturbation or intercourse), thinking about having sex, or feeling frustrated due to lack of sex.

- 11. Over the past 4 weeks, how often have you felt sexual desire?
- a. Almost never or never
- b. A few times (much less than half the time)
- c. Sometimes (about half the time)
- d. Most times (much more than half the time)
- f. Almost always or always

- 12. Over the past 4 weeks, how would you rate your level of sexual desire?
- a. Very low or none at all
- b. Low
- c. Moderate
- d. High
- e. Very high
- 13. Over the past 4 weeks, how satisfied have you been with your overall sex life?
- a. Very dissatisfied
- b. Moderately dissatisfied
- c. About equally satisfied and dissatisfied
- d. Moderately satisfied
- e. Very satisfied
- 14.Over the past 4 weeks, how satisfied have you been with your sexual relationship with your partner?
- a. Very dissatisfied
- b. Moderately dissatisfied
- c. About equally satisfied and dissatisfied
- d. Moderately satisfied
- e. Very satisfied
- 15. Over the past 4 weeks, how do you rate your confidence that you can get and keep your erection?
- a. Very low
- b. Low
- c. Moderate
- d. High
- e. Very high

APPENDIX H

Sexual Distress Scale – Adapted from the Female Sexual Distress Scale (FSDS: Derogatis et al, 2008)

Please answer the following questions thinking about the past 6 months.

1. How often did you feel distressed about your sex life ?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
2. How often did you feel unhappy about your sexual relationship ? (If applicable)						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
3. How often did you feel guilty about some aspect of your sexual function?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
4. How often did you feel frustrated by some aspect of your sexual function ?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
5. How often did you feel stressed about sex ?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		

6. How often did you feel interior because of some aspect of your sexual function?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
7. How often did	you feel worried	about sex?				
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
8. How often did	you feel sexually	inadequate?				
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
9. How often did you feel regrets about your sexuality ?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
10. How often did you feel embarrassed about some aspect of your sexual function ?						
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		
11. How often di	d you feel dissatis	sfied with your sex	life?			
0	1	2	3	4		
Never	Rarely	Occasionally	Frequently	Always		

12. How often did you feel angry about your s	sex life?
--	-----------

0 1 2 3 4

Never Rarely Occasionally Frequently Always

APPENDIX I

The Satisfaction With Life Scale (Diener, Emmons, Larsen & Griffin, 1985)

DIRECTIONS: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

I = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree or Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree
1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

APPENDIX J

The Ten-Item Personality Inventory - Gosling, Rentfrow, & Swann, 2003

DIRECTIONS: Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which <u>you agree or disagree with that statement</u>. You should rate the extent to which that trait applies to you, even if one characteristic applies more strongly than the other.

- 1 = Disagree Strongly
- 2 = Disagree Moderately
- 3 = Disagree A Little
- 4 = Neither Agree Nor Disagree
- 5 = Agree A Little
- 6 =Agree Moderately
- 7 =Agree Strongly

I see myself as:

- 1. Extraverted, enthusiastic
- 2. Critical, quarrelsome
- 3. Dependable, self-disciplined
- 4. Anxious, easily upset
- 5. Open to new experiences, complex
- 6. Reserved, quiet
- 7. Sympathetic, warm
- 8. Disorganized, careless
- 9. Calm, emotionally stable
- 10. Conventional, uncreative

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Davis, S.N.P., Maykut, C.A., Binik, Y.M., Amsel, R., & Carrier, S. (2011). Tenderness as measured by pressure pain thresholds extends beyond the pelvis in Chronic Pelvic Pain Syndrome in men. *Journal of Sexual Medicine*, 8, 232-239.

Book Chapters:

Meana, M., Maykut, C., & Fertel, E. (submitted). Painful intercourse: Genitopelvic pain/penetration disorder. In K.M. Hertlein, G. R. Weeks, & N. Gambescia (Eds). *Systemic Sex Therapy* (2nd Edition) New York: Haworth Press.

Meana, M., Fertel, E., & Maykut, C. (submitted). Treating genital pain associated with sexual intercourse. In: Z. Peterson (Ed.) *Handbook of Sex Therapy*. Wiley-Blackwell.

Conference Presentations:

Farmer, M.A., Maykut, C.A., Binik, Y.M., & Schweinhardt, P. (August, 2012). Dissociating nonpainful and painful vulvar mechanical pressure: An examination of psychophysical properties. Poster presented at the International Association for the Study of Pain (IASP) meeting, Milano, Italy.

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