EFFICACY OF BIBLIOTHERAPY AS A TREATMENT FOR LOW SEXUAL DESIRE IN WOMEN

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In Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy

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The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

EFFICACY OF BIBLIOTHERAPY AS A TREATMENT FOR LOW SEXUAL DESIRE IN WOMEN

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EFFICACY OF BIBLIOTHERAPY AS A TREATMENT FOR LOW SEXUAL DESIRE IN WOMEN

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ABSTRACT

Anywhere from 20 to 52% of women suffer from low sexual desire at some point in their lives (Laumann, Michael & Kolata, 1995; Laumann et al., 1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008; West et al., 2008), and it is associated with decreases in physical and emotional satisfaction (Laumann, Paik, & Rosen, 1999). Low sexual desire is one of the most complex sexual concerns to treat, and currently, no standard treatment exists. The purpose of this study was to test the efficacy of bibliotherapy for women experiencing low sexual desire who are married, heterosexual, and generally happy with their relationships. The current study compared participants’ scores on measures of sexual desire, sexual arousal, and other components of sexual functioning (e.g. lubrication, satisfaction), including overall sexual functioning, across three different groups: 1) a bibliotherapy condition in which participants read A Tired Woman’s Guide to Passionate Sex (Mintz, 2009), 2) a second bibliotherapy condition in which participants read another popular press self-help book entitled Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life (Hall, 2004), and 3) a wait-list control group. A total of 45 participants were included in the sample and completed measures six weeks apart. Results indicated that participants in a combined intervention group (e.g. those who received either one of the two bibliotherapy interventions) demonstrated statistically greater gains across time in sexual desire, satisfaction,
lubrication, orgasm, and sexual functioning, as compared to the control group. Additionally, participants who read *A Tired Woman’s Guide to Passionate Sex* demonstrated significantly greater gains in sexual desire, lubrication, orgasm, satisfaction, and overall sexual functioning across time as compared to the control group and exhibited significantly greater gains in sexual desire, lubrication, and overall sexual functioning across time as compared to participants who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*. Those who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* made statistically greater gains over time in sexual desire, lubrication, and orgasm as compared to the control group. This was the second study to date exploring bibliotherapy for low sexual desire in women and established *A Tired Woman’s Guide to Passionate Sex* as the first probably efficacious treatment for low sexual desire in women.

*Keywords:* Hypoactive Sexual Desire Disorder, Low Sexual Desire, Treatment, Bibliotherapy, Women
Chapter One: Introduction

Anywhere from 20 to 52% of women suffer from low sexual desire at some point in their lives (Laumann, Michael & Kolata, 1995; Laumann et al., 1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008; West et al., 2008). Low sexual desire is the number one complaint brought to sex therapists (Schnarch, 2000). For women, low sexual desire is associated with decreased happiness and physical and emotional satisfaction (Laumann, Paik, & Rosen, 1999). Low sexual desire in women has also been linked to poor marital adjustment and an increased risk for depression and anxiety (Trudel, 1997). In addition, Laumann and his colleagues (1999) noted that the impact of sexual dysfunction on quality of life in women may tend to be more far-reaching and severe than that of men. Given its high prevalence and associated risk factors, developing an effective and widely accessible treatment for low sexual desire seems imperative.

Defining Low Sexual Desire

Prior to describing why outcome studies on bibliotherapy for low sexual are sorely needed, it is important to first elucidate how low sexual desire is defined, including who defines it as a problem. Importantly, there is often a sharp contrast between how professionals describe and label sexual dysfunctions and how women define their own sexual problems and experiences (Brotto, 2010; King, Holt, & Nazareth, 2007). Of note, one study found low agreement between researcher-applied diagnoses of sexual arousal disorder and sexual desire disorder and participants’ perceptions that they were indeed experiencing a sexual problem (38% and 39% agreement for sexual arousal disorders and sexual desire disorders, respectively) (King et al., 2007). Clearly, such profound differences between professionals’ and women’s perceptions of what constitutes a sexual
problem have clear implications for the identification and treatment of sexual dysfunction.

Indeed, there is widespread disagreement among professionals regarding what should be labeled as a sexual desire disorder. Hypoactive Sexual Desire Disorder (HSDD), as included in the fourth edition text revision of the *Diagnostic and Statistical Manual of Mental Disorders*, (DSM IV-TR; American Psychiatric Association, 2000) has been subsumed under the diagnosis of Sexual Interest/Arousal Disorder in Women in the proposed version of the *DSM-V* (APA, 2010). Diagnoses surrounding desire and arousal problems have been separated for men and for women in the proposed fifth edition of the DSM-V. In addition, problems with sexual desire and arousal have been combined into one diagnosis, given the known overlap between these two constructs (Balon, 2008). The amount of time that an individual must experience this problem has also been extended to at least six months in the proposed DSM-V, as it has been observed that levels of sexual desire in women fluctuate and tend to vary depending on the time assessed (Mercer et al., 2005). Although there has been much disagreement and ambiguity surrounding sexual desire disorders, many professionals have asserted that these diagnoses should rely heavily on whether or not a client reports subjective distress (Beck, 1995).

Given the diagnostic complexities involved in identifying and labeling sexual desire disorders in women, the current study relies on women’s self-identification of experiencing low sexual desire. Having women self-identify as having sexual concerns is not only “…an improvement over the DSM perspective of a linear model of sexual response which is based on a medical model of men’s sexuality…” (Brotto, 2010, p. 228), but it is also entirely consistent with how women most often utilize bibliotherapy in the
real world (i.e., they feel discontent and seek help for it, irrespective of any expert-based definitional criteria of their distress).

Finally, it is important to note that women who meet *DSM* diagnostic criteria for HSDD can be conceptualized as one subgroup of women suffering from subjectively defined problems with low sexual desire. As noted above, this study focuses on subjectively defined low sexual desire. In other words, participants self-identified as having low sexual desire rather than being assessed by a clinician as meeting diagnostic criteria for HSDD. Nevertheless, when reviewing prior studies, if researchers assessed for *DSM*-defined HSDD, rather than subjectively defined low sexual desire, the term HSDD will be used. Both terms will be used when the construct or studies being discussed apply to both the more general concern of LSD as well as the specific diagnosis of HSDD.

**Etiology of Low Sexual Desire**

One of the primary reasons for the complexity involved in defining and treating low sexual desire (LSD) is the multiplicity of factors implicated in its etiology, including physical, emotional and interpersonal causes. Research has identified causes of low sexual desire as varied as hormonal changes, menopause, medication side effects, pregnancy, Sexually Transmitted Infections (STIs), hypothyroidism, diabetes, infertility, stress and exhaustion, death of a loved one, loss of a job, negative body image, relationship distress, depression, anxiety, substance abuse, past sexual trauma, negative beliefs about sex, and infidelity (Mintz, 2009). Yet, in one study with over 2000 women, Ellison, (2006) found that women cited being too tired as the number one reason for their lack of sexual desire.
Medical treatments for LSD

Recently, medical treatments for low desire in women have been given more attention than psychological treatments, a fact that is likely due to the overall trend of medicalizing sexual disorders (Heiman, 2008). The “little blue pill” (Viagra), prescribed for erectile dysfunction, provides a good illustration of the ways in which sexual dysfunctions are viewed by society at large as being primarily biological in nature. The two hormones usually implicated as potentially causal in LSD are estrogen and testosterone, with estrogen being responsible for vaginal lubrication and elasticity, and testosterone associated with sexual desire itself (Apperloo, Van Der Stege, Hoek, & Schultz, 2003; Bachmann & Nevadansky, 2000). Although some evidence suggests that testosterone patches and estrogen replacement therapy (ERT) may increase sexual desire in women (Chudakov, Zion, & Belmaker, 2007; Sarrel, 2000), these treatments have been linked with serious side effects including breast cancer, stroke and blood clots (Anderson et al., 2004; Davis et al., 2008; Tamimi, Hankinson, Chen, Rosner, & Colditz, 2006). Finally, a German drug called Flibanserin, which acts on neurotransmitters in the brain, has been developed as a treatment for low sexual desire in women (Kresge, 2009). This drug was recently presented before the U.S. Food and Drug Administration for approval for the general public, but was denied (Wilson, 2010). The long-term safety of such a drug is yet unknown.

Psychological Treatments for LSD

Given the potential serious and life threatening side effects of existing medical treatments for LSD (Anderson et al., 2004; Davis et al., 2008; Tamimi et al., 2006), the need for effective psychological treatments is imperative. Although many treatments for
both LSD and HSDD have been described in the literature, few controlled outcome studies exist (Beck, 1995). The dearth of empirically validated treatments may be in part due to a lack of solid theory behind the etiology and treatment of sexual desire disorders (Everaerd & Both, 2000). In addition no standard treatment exists for HSDD (Ullery, Millner & Willingham, 2002), thus limiting researchers who might otherwise conduct controlled outcome studies on such a treatment. Nonetheless, many professionals (Brandon & Goldstein, 2007; Hertlein et al., 2007; Trudel, Marchand, & Ravart, 2001) argue for a treatment that is integrative enough to address the complex issues involved in the disorder’s etiology.

Much of the literature on treating LSD is made up of case studies and descriptions of therapeutic interventions that have not been empirically validated (Trudel et al., 2001). Furthermore, the few studies that do exist are often wrought with methodological weaknesses, including lack of a control group and use of unimodal treatment techniques.

To date, only three face-to-face therapeutic treatments for LSD and HSDD have been explored and supported empirically: two couples’ interventions and one individual intervention (Brotto, Basson, & Luria, 2008; Hurlbert, 1993; Trudel et al., 2001). Hurlbert (1993) investigated the effects of a group therapy intervention for heterosexual couples where the female partner had been diagnosed with HSDD and found that female participants reported statistically significant improvements on measures of sexual desire and sexual arousal at the end of the eight week treatment period. A second study involved cognitive-behavioral group therapy for HSDD in women and resulted in 74% of participants reporting that they were improved or symptom free at the end of treatment (Trudel et al., 2001). A third study implemented a brief, three session psychoeducational
group utilizing mindfulness-based exercises, cognitive-behavioral exercises, and couples’ therapy exercises as a treatment for women with clinician-diagnosed sexual arousal and sexual desire disorders, with improvements in sexual functioning found by the end of treatment (Brotto, 2008). Yet, implementing many face-to-face therapeutic interventions, including the aforementioned three group treatments, requires specialized training on the part of the clinicians and heavy involvement by the participants, a criticism of many existing treatments for low sexual desire in women (Ullery et al., 2002). In addition, two out of the three interventions require the physical presence and involvement of a partner. Even a brief intervention such as Brotto et al.’s (2008) three session psychoeducational group requires the presence of a trained clinician and may limit the accessibility of the program on a larger scale. Additionally, many insurance companies may not cover group treatment, therefore further limiting the accessibility of treatment to many. Clearly, given prevalence rates ranging from 20 to 52% of all women (Laumann et al., 1995; Laumann et al., 1999; Shifren, et al., 2008; West et al., 2008), an efficient, widely accessible and cost effective treatment is needed.

**Bibliotherapy for Sexual Dysfunction**

The World Health Organization (WHO) (2004) estimates that around 85% of Americans will not be treated for diagnosable mental health or substance abuse disorders within one year. Particularly with such a highly sensitive topic as sexual health, many individuals do not seek professional help for their concerns. Laumann and his colleagues (1999) found that only 10% of the men and 20% of the women in their study who reported symptoms of sexual dysfunction sought help from a medical professional. Both because of people’s reluctance to seek help and because the high demand for sex therapy
services cannot be feasibly accommodated by mental health professionals, numerous “minimal intervention” or self-help strategies in the field of sex therapy have been developed over the last four decades, including bibliotherapy (van Lankveld, 2009).

Beginning with the least intensive and least expensive form of treatment that could potentially help an individual is consistent with the stepwise care approach (van Lankveld, 2009) and the PLISSIT model of treating sexual dysfunctions (Annon, 1974). Bower and Gilbody’s (2005) stepwise care approach posits that beginning with the least invasive treatment that still provides the possibility of healing is ideal because it maximizes client and practitioner resources and minimizes risks and costs associated with more intensive treatments. Similarly, the PLISSIT model (Annon, 1974) has been used to support minimal intervention and self-help strategies in the field of sex therapy since its inception. Developed by Jack Annon in 1974, PLISSIT describes the stages of intervention for sexual dysfunction, namely, Permission, Limited Information, Specific Suggestions, and Intensive Therapy. The model posits that most of the time individuals will be able to resolve sexual dysfunctions without intensive therapy. Permission refers to the powerful impact that feeling freer to explore issues of sexual dysfunction that were previously ignored can have on symptom resolution. Limited Information refers to individuals’ acquisition of general psychoeducation surrounding sexual concerns, and Specific Suggestions describes information about interventions for sexual dysfunctions, which may be gained informally or more formally with a therapist or professional. Intensive Therapy is the last step in the model, and according to Annon (1976), is much less often needed than the first three steps. In fact, Annon (1976) suggested that 80-90% of sexual problems can be resolved using the first three steps in the model. Consistent
with Annon (1976)’s assertion that minimal intervention is sufficient to resolve most sexual dysfunction, research findings indicate that more people will read a self-help book each year than visit a mental health professional (Norcross, 2006).

Bibliotherapy for sexual dysfunctions has been explored in a series of controlled studies and meta-analyses (van Lankveld, 2009). In one meta-analysis of 40 self-help studies involving a wide range of concerns, researchers found that bibliotherapy for sexual dysfunctions had an effect size of 1.86 (Cohen’s d) compared to an average effect size of .76 for the other topical (e.g., anxiety, depression) self-help interventions studied (Gould & Clum, 1993). This meta-analysis should be interpreted with caution however, as only one study involving sexual dysfunction was included. In a second meta-analysis of 70 self-help interventions (Marrs, 1995), again, bibliotherapy for sexual dysfunctions demonstrated the highest relative effect size compared to other problems studied. The effect size for the four studies involving bibliotherapy for sexual dysfunctions was 1.28 (Cohen’s d), while the effect size for all concerns studied was 0.57 (Marrs, 1995). A third meta-analysis including 12 studies on bibliotherapy for sexual dysfunction found that bibliotherapy for sexual dysfunctions demonstrated an average effect size of .68 (Cohen’s d) compared to no treatment groups (van Lankveld, 1998). Such findings are encouraging when considering the prevalence of sexual dysfunctions and the high need for low-cost, easily accessible treatment.

**Bibliotherapy for Low Sexual Desire**

Although there is much research in general supporting the effectiveness of self-help strategies in comparison to no treatment (Norcross, 2006), HSDD is a highly complex disorder that has not been widely studied in the self-help arena. The same goes
for LSD in general. Until recently, no data existed on bibliotherapy for the treatment of low sexual desire. Researchers (Mintz, Balzer & Bush, 2010) administered Dr. Laurie Mintz’s (2009) self-help book for low sexual desire entitled *A Tired Woman’s Guide to Passionate Sex* to a group of forty-five women reporting low sexual desire. *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) contains a six pronged treatment for low sexual desire in women using psychoeducation and cognitive-behavioral strategies. The six components target cognitions (*Thoughts*), communication strategies (*Talk*), time management (*Time*), non-demand pleasuring strategies and touch exercises (*Touch*), adding variety in sexual behaviors (*Spice*), and planning scheduled “dates” to engage in sexual activity (*Trysts*). Participants completed measures of sexual desire and overall sexual functioning, with the sexual functioning measure containing subscales assessing sexual desire, sexual arousal, lubrication, sexual satisfaction, orgasm, and sexual pain. Participants completed these measures at the beginning of the study, six weeks later at the end of the study, and at a seven week follow-up. At three weeks, participants in the intervention group responded to a questionnaire asking them about their perceptions of the intervention and if they had done anything in addition to reading the book to address their concerns of low sexual desire.

Compared to the wait-list control group, the intervention group significantly increased their scores on sexual desire, sexual arousal, sexual satisfaction, and overall sexual functioning, with effect sizes (Cohen’s *d*) exceeding 1.00 both at the end of the study and at the seven week follow-up. On one of the two measures assessing sexual desire, the Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992), participants’ scores in the intervention group increased from 36.06 at pre-test to 55.44 at post-test, and
participants’ scores in the control group did not change in a statistically significant manner, with scores beginning at 35.34 and ending at post-test at 37.00, $F(1, 43) = 42.6$, $p < .001$, $\eta^2 = .50$. The power was 1.0, and the post-test ES was 1.19. On the second measure of desire, the Female Sexual Functioning Index (FSFI; Rosen et al., 2000) Desire Subscale, the Intervention Group mean increased from 2.37 at pre-test to 3.79 at post-test, whereas the Control group mean decreased from 2.59 at pre-test to 2.47 at post-test, $F(1, 43) = 38.47$, $p < .001$, $\eta^2 = .47$. The power was 1.0. Cohen’s $d$ was 1.36. Regarding sexual arousal, the intervention group’s scores on the FSFI Arousal Subscale increased from 3.55 at pre-test to 5.05 at post test, while the control group’s scores did not statistically differ from pre-test to post-test (3.25 at pre-test and 3.33 at post-test), $F(1, 43) = 11.06$, $p < .01$, $\eta^2 = .16$. In terms of sexual satisfaction, the intervention group’s scores on the FSFI Satisfaction Subscale increased from 3.88 at pre-test to 4.88 at post test, while the control group’s scores did not statistically increase over time (2.89 at pre-test and 3.22 at post-test), $F(1, 43) = 22.27$, $p < .001$. Finally, the intervention group made statistically significant gains on the overall measure of sexual functioning, the FSFI Total Score, as compared to the control group. The intervention group’s mean was 22.72 at pre-test, and 29.41 at post-test, while the control group’s mean was 21.17 at pre-test and 24.27 at post-test, $F(1, 43) = 8.85$, $p < .01$, $\eta^2 = .17$. While further research is still needed on this particular self-help book, these results are encouraging.

The Present Study

Given the prevalence of LSD, the toll that it takes on women’s reported levels of emotional and physical well-being, and the complexity involved in treating this concern, developing and validating an accessible and efficient treatment is important. Existing
treatments (Brotto et al., 2008; Hurlbert 1993; Trudel et al., 2001) prove promising as interventions for LSD and HSDD, although these treatments require practitioner training and resources and client commitment. Prior research (Gould et al., 1993; Marrs, 1995; van Lankveld, 1998) provides good support for bibliotherapy as an effective, accessible treatment for sexual dysfunction more generally. Recent research (Mintz et al., 2010) suggests that the self-help book, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) may be effective in increasing women’s levels of sexual desire, sexual arousal, sexual satisfaction, and overall sexual functioning. This study improves upon the methodology used in the one existing prior study on bibliotherapy for sexual desire (Mintz et al., 2010). Such methodological improvements are based in large part on Heiman and Meston’s (1997) review of empirically supported treatments in sex therapy. Specifically, these researchers outlined the criteria for the establishment of particular treatments as well-established and probably efficacious according to American Psychological Association’s Task Force on Promotion and Dissemination of Psychological Procedures (1998). Part of this process involves comparing a treatment to a placebo, active control group and/or other interventions. Importantly, Heiman and Meston (1997) noted that the data on treatments for desire disorders were so lacking that they did not even review empirical findings in this area. This study attempts to add to the literature by furthering the research investigating *A Tired Woman’s Guide to Passionate Sex* as a treatment for LSD and by improving the precision and elegance of the previous research design. Specifically, while the prior study (Mintz et al., 2010) compared this intervention to a wait-list control group, the present study compared the intervention (*A Tired Woman’s Guide to Passionate Sex*; Mintz, 2009) to both a wait-list control group and to an existing, untested but seemingly

Primary hypotheses included: 1) Participants in the Mintz and Hall Intervention groups will make significantly greater gains over time in reported sexual desire and other aspects of sexual functioning (sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning) as compared to the wait-list control group at the end of the six week study; and

2) Participants in the Mintz Intervention group will make statistically equal or greater gains over time in reported sexual desire and other aspects of sexual functioning (sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning) as compared to the Hall Intervention group at the end of the six week study. In sum, it was hypothesized that doing something (reading a self-help book related to problems of sexual desire) is more effective at improving sexual desire, sexual arousal, and other aspects of sexual functioning (e.g. sexual satisfaction, orgasm) than doing nothing. Given past research findings (Mintz et al, 2010), it was also hypothesized that reading Dr. Mintz’s intervention for LSD would produce changes in sexual desire, sexual arousal and other aspects of sexual functioning that are statistically equivalent or greater than those in the Hall Intervention group.
Chapter Two: Literature Review

Problems of low sexual desire in women abound, with lifetime prevalence rates ranging from 20 to 52% (Laumann, Michael & Kolata, 1995; Laumann et al., 1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008; West et al., 2008). A large portion of women experiencing these concerns also report significant distress as a result of their low desire (Rosen, Shifren, Montz, Odom, Russo, & Johannes, 2009). A recent study (Rosen et al., 2009) of 10,429 women reporting low sexual desire demonstrated that about a third of the sample was distressed by their desire problem. Sexual distress resulting from the low sexual desire was inversely related to sexual satisfaction and happiness. Laumann and his colleagues (1999) also reported a link between low sexual desire and decreased happiness, physical satisfaction, and emotional satisfaction. Low sexual desire has also been associated with anxiety and marital problems (Trudel, 1997). Not surprisingly, Rosen et al. (2009) found that women who reported low sexual desire and who were in current romantic relationships were more sexually distressed than those who were not in romantic relationships.

Although problems of low sexual desire are common, desire disorders are often challenging to treat (Hertlein, Weeks, & Gambescia, 2007) and refractory to interventions aimed at alleviating the condition (Segraves & Woodard, 2006). In other words, individuals with desire disorders often leave treatment without feeling any better than when they initiated treatment (Segraves & Woodard, 2006). In addition, the vast majority of existing treatments have not been empirically tested or validated, with most interventions relying on clinical experiences and case studies (Trudel et al., 2001). To date, only three studies have demonstrated empirical support for a face-to-face
therapeutic approach to treating LSD or HSDD (Hurlbert, 1993; Brotto, Basson, & Luria, 2008; Trudel et al., 2001). This lack of empirical support and professional consensus surrounding appropriate treatments for the desire disorders is especially problematic given the fact that complaints of low sexual desire are the number one issues presented to sex therapists (Schnarch, 2000).

Although more research is clearly needed in the area of treating LSD, most individuals who have mental health concerns will never seek help (Norcross, 2006). In Rosen et al.’s (2009) sample of 10,429 women reporting low sexual desire, just over 25% of the sample discussed their concerns with a healthcare provider. About 74% of the women had either sought informal help, acquired information from media sources (television, internet, radio, or printed materials), or had done nothing to address their concerns (Rosen et al., 2009). Treatments that are easily accessible, affordable, and allow for privacy thus may have the potential to reach a greater proportion of sufferers of LSD. Previous research (Gould et al., 1993; Marrs, 1995; van Lankveld, 1998) has provided good support for bibliotherapy as an effective treatment for sexual dysfunctions. One recent study demonstrated that bibliotherapy was an effective intervention for low sexual desire in women (Mintz, Balzer & Bush, 2010). Given the extensive nature of the problem, the dearth of research investigating treatments for low sexual desire in women, and the relatively low incidence of professional help seeking behaviors among sufferers, developing and validating widely accessible treatments for low sexual desire in women seems important. The current study expands the knowledge base of treatments for LSD in women by investigating the effectiveness of a previously studied bibliotherapy
intervention for low sexual desire as compared to another similar, but unstudied, bibliotherapy treatment for low sexual desire and a wait-list control group.

**Defining Low Sexual Desire**

Professionals across disciplines have long struggled to define and operationalize low sexual desire in a uniform fashion. Even the diagnosis involving low sexual desire, Hypoactive Sexual Desire Disorder (HSDD), has been strongly debated (Beck, 1995). According to the fourth edition text revision of the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000), a diagnosis of HSDD can be made when three criteria are met. The individual must report a lack of desire to engage in sexual behavior and be without sexual thoughts or fantasies. He or she must be noticeably distressed as a result of the lack of desire and fantasy, which may cause problems in romantic or interpersonal relationships. The lack of desire must not be better accounted for by a general medical condition, another Axis I diagnosis, or the effects of a substance.

The previous nosology is based upon the linear sexual response cycle outlined in the *DSM IV-TR* (APA, 2000), which includes the phases of desire, excitement (or arousal), orgasm and resolution. In this cycle, desire leads to arousal, which leads to orgasm, which results in resolution. Traditionally, sexual dysfunctions have been categorized according to their disruption in this sexual response cycle. Some (Basson, 2007) have criticized the current diagnosis of HSDD as being based upon a sexual response cycle that is not appropriate for women. Basson (2007) has argued that women’s sexual desire is frequently more responsive than spontaneous. In Basson’s model, women may experience no physical desire, but engage in activities based on cognitive desire (i.e., knowing sex is important) and then experience desire as a result of the actual sexual
contact and resultant arousal. Basson (2007) thus describes a cyclical sexual response cycle where desire and arousal often overlap rather than precede or follow one-another. In her view, far fewer women would be diagnosed with HSDD if it was understood that women’s sexual desire is more often responsive than spontaneous.

Just how many women suffer from LSD or HSDD has been another issue which has been widely debated. Some have argued that sexual desire in women naturally ebbs and flows and that therefore, pathologizing it would be a mistake (Basson, 2007). In reality, self-reported levels of sexual desire in women tend to vary depending on the time assessed (Mercer et al., 2005). A group of researchers found that around 40% of women reported experiencing low sexual desire for one month out of the year, and another 10% reported experiencing low sexual desire for six months out of the year (Mercer et al., 2005). Significant differences may exist between the women who experienced low sexual desire for six months versus the group who experienced low sexual desire for one month. In fact, this study (Mercer et al., 2005) was cited in the explanation of proposed changes to the HSDD diagnosis in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2010).

In the proposed version of the DSM-V (APA, 2010), HSDD is subsumed under the diagnosis of Sexual Interest/Arousal Disorder in Women, and diagnoses for desire disorders are separated for men and for women. Sexual desire was replaced with sexual interest in the proposed version of the DSM-V, as some believe that sexual interest more accurately reflects the construct than does desire (Brotto, 2010). Reasons cited included the connotation between desire and biological drive, which obscures the relationship between sexual desire and psychological motivation (Brotto, 2010). The current study
will continue to use the term sexual desire, however, as much of the literature, including measures, has utilized this terminology.

Given the overlap between arousal and desire disorders in women (Balon, 2008), the new *DSM-V* criteria for Sexual Interest/Arousal Disorder require that the woman experience low sexual interest or arousal for at least 6 months. For a diagnosis, at least four of six indicators must be met:

1. Absent/reduced interest in sexual activity;
2. Absent/reduced sexual/erotic thoughts or fantasies;
3. No initiation of sexual activity and is not receptive to a partner’s attempts to initiate;
4. Absent/reduced sexual excitement/pleasure during sexual activity (on at least 75% or more of sexual encounters);
5. Desire is not triggered by any sexual/erotic stimulus (e.g., written, verbal, visual, etc.);
6. Absent/reduced genital and/or nongenital physical changes during sexual activity (on at least 75% or more of sexual encounters) (APA, 2010).

Similar to the *DSM IV-TR* (APA, 2000), the individual must also exhibit distress as a result of the reduction or absence in desire or arousal, and the symptoms must not be due to a general medical condition. It has generally been accepted that a diagnosis related to low sexual desire should rely heavily on the criteria relating to subjective reports of distress (Beck, 1995). Yet, many epidemiological studies investigating prevalence rates of low sexual desire have failed to ask participants about their levels of subjective distress, a crucial variable to consider when diagnosing sexual desire disorders in women (Rosen at al., 2009).
Given the diagnostic complexities involved in identifying and labeling sexual desire disorders in women, the current study relies on women’s self-identification of experiencing low sexual desire. Having women self-identify as having sexual concerns is not only “…an improvement over the DSM perspective of a linear model of sexual response which is based on a medical model of men’s sexuality…” (Brotto, 2010, p. 228), but it is also entirely consistent with how women most often utilize bibliotherapy in the real world (i.e., they feel discontent and seek help for it, irrespective of any expert-based definitional criteria of their distress).

Finally, it is important to note that women who meet diagnostic criteria for HSDD can be conceptualized as one subgroup of women suffering from subjectively defined problems with low sexual desire. This study focuses on subjectively defined low sexual desire. In other words, participants self-identified as having low sexual desire rather than being assessed by a clinician as meeting diagnostic criteria for HSDD.

**Etiology of Low Sexual Desire (LSD)**

Categorizing and defining problems of low sexual desire in women has always been complicated and difficult, in part due to the myriad factors involved in its etiology. Symptoms of LSD can be due to physical, emotional, or relational causes, or a combination of factors.

In regard to physical causes, LSD has been linked to hormonal fluctuations, in particular those associated with menopause, birth control, pregnancy and breastfeeding (Bancroft, 2002; Byrd, Shibley Hyde, DeLamater, & Plant, 1998; Crooks & Baur, 2005; Graham, Ramos, Bancroft, Maglaya, & Farley, 1995). LSD has also been linked with hypothyroidism, diabetes and sexually transmitted infections (STIs) (Laumann, Das, & Waite, 2008). In regard to psychological causes, LSD has been associated with death of a
loved one and loss of a job (Bodenmann, Ledermann, Blattner, & Galluzzo, 2006). Negative body image, relationship distress, depression, anxiety, substance abuse, past sexual trauma, negative beliefs about sex and infidelity have also been implicated (Mintz, 2009). In one study of 2,632 women (Ellison, 2006), participants were asked to cite their most often experienced sexual concerns. The items “being too tired to have sex” and “being too busy to have sex” were the concerns most frequently endorsed, although participants tended to accept these difficulties as normal and expected. This research suggests that stress, fatigue and life demands may be some of the most frequent causes of LSD in women. In one study (Pearson, 2008), women who were experiencing role overload were at greater risk for problems with their psychological health, job satisfaction, and leisure satisfaction.

**Treatments for LSD: The Need for an Integrative Approach**

In part due to the complex and multifaceted etiologies of desire disorders, many have advocated for an integrative approach to treatment (Brandon & Goldstein, 2007; Hertlein et al., 2007; Trudel, Marchand, & Ravart, 2001). In Weeks, Hertlein and Gambescia’s (2009) treatment review and recommendations for HSDD, they advocate for assessing and treating individual, interactional, and intergenerational factors. In the individual realm, they suggest assessing for biological contributors to low sexual desire (and/or referring the client to a medical professional), psychological factors including anxiety, depression and level of self-esteem, and cognitive factors including beliefs about sex, and current sexual behaviors and preferences. Concerning interactional issues, they recommend assessing for couple dynamics, communication patterns, power struggles, relationship discord, and ways of relating sexually. Finally, they suggest investigating
intergenerational causes including familial and cultural beliefs about sex, which may influence present dynamics. While this integrative approach has not been tested empirically, it provides an example of how professionals in the field have recognized and conceptualized the complex etiologies of desire disorders.

**Biological Approaches to Treatment: A Critique**

In general, the cultural trend in the United States has been towards the medicalization of sexual dysfunctions (Kleinplatz, 2001). While this trend has brought about many benefits, including increasing cultural visibility of sexual problems and patient comfort in seeking treatment for sexual dysfunctions, it has also brought about several disadvantages (Rosen, 2007). According to Rosen (2007), addressing sexual dysfunctions with medical treatments alone may ultimately result in treatment failure because significant relational and individual psychological factors may be contributing to and worsening the problem. As treatments for male sexual problems have until recently garnered more professional and cultural attention than treatments for female sexual problems, an example of the above trend taken from the area of male sexual dysfunction illustrates this point more clearly. Many men who receive PDE5 inhibitors (Viagra, Cialis) from their physicians for erectile dysfunction do not maintain initial treatment gains and end up discontinuing the medication in part due to failed expectations and underlying partner relational dynamics (Rosen, 2007). This demonstrates the problems associated with focusing solely on the medical aspects of sexual dysfunctions.

Another critique of the medicalization of sexual dysfunctions can be found in the works of feminist researchers and professionals in the field of sex therapy (Kleinplatz, 2001). According to this view, biological approaches tend to focus too much on female sexual dysfunction rather than normal functioning and thereby pathologize normal
changes in sexual desire, sexual arousal and other aspects of sexual functioning. Some
even argue that the underpinnings of the movement to medicalize female sexual problems
are rooted in financial motivations (Kleinplatz, 2001). By trying to solve what are
actually normative changes in sexual functioning with medical treatments, women may
be exposed to harmful side effects unduly. In addition, they may experience undue
anxiety surrounding their sexual experience. Part of treatment may thus include providing
women with information about typical patterns of female sexual functioning, as well as
offering techniques and interventions to enhance functioning where desired.

Some of these concerns are demonstrated in the currently available treatments for
female sexual dysfunction. Medicines aimed at alleviating the symptoms of LSD
typically target the two hormones associated with sexual desire in women, estrogen and
testosterone. Testosterone is the hormone primarily associated with sexual desire, while
estrogen helps create vaginal lubrication and elasticity (Apperloo, Van Der Stege, Hoek,
may increase sexual desire in women (Chudakov, Zion, & Belmaker, 2007), but
testosterone therapy may result in an increased risk for breast cancer after just one year
(Davis et al., 2008; Tamimi, Hankinson, Chen, Rosner, & Colditz, 2006). While the patch
is sometimes prescribed “off label” by physicians for sexual desire concerns in women,
the U.S. Food and Drug Administration voted against approving the patch as a treatment
for LSD in women due to safety concerns (Moynihan, 2004). Prescribing a medication
“off label” refers to the practice of prescribing a medication for a purpose other than that
for which it has been officially approved. In the example above, some physicians have
prescribed the testosterone patch for women believing that it will increase their sexual
desire, although the F.D.A. has not approved this medication as a treatment for LSD even though it’s approved for another disorder. This may be problematic as the long-term effects of providing this medication off-label are not known.

Estrogen replacement therapy (ERT) may heighten sexual desire in post-menopausal women (Sarrel, 2000), but like testosterone patches, it may also be linked with dangerous side effects, including increased risk of stroke and blood clots (Anderson et al, 2004). ERT has also been linked with heart disease, gallbladder disease, and breast cancer, although a low dose of estrogen is sometimes used as a treatment for osteoporosis in women. A drug developed in Germany called Flibanserin was recently being tested for use in the general public (Kresge, 2009), but the U.S. Food and Drug Administration denied its application for F.D.A. approval (Wilson, 2010). Flibanserin was originally developed as an antidepressant but was discovered to have desire elevating properties (Kresge, 2009). Unfortunately, long-term safety information about Flibanserin is yet unknown.

Psychological Approaches.

The following section begins with a review of the American Psychological Association’s criteria for empirically supported treatments (APA, 1998). Next, it outlines the research investigating psychological treatments for LSD and HSDD.

Criteria for evaluating treatment effectiveness. In their review of empirically supported psychological treatments, the American Psychological Association’s Task Force on Promotion and Dissemination of Psychological Procedures (1998) compiled a list of therapies that were categorized into two groups, therapies which were designated as well established, and those which were labeled probably efficacious.
Well-established treatments as those which fulfill the following criteria (APA, 1998): 1) At least two good between group design experiments demonstrating efficacy; or 2) A large series of single case design experiments (n >9) demonstrating efficacy.

Regarding the former, efficacy must be demonstrated in one or more of the following ways: 1) superior (statistically significantly) to a pill or psychological placebo or to another treatment; 2) equivalent to an already established treatment in experiments with adequate sample sizes. Regarding the series of single case experimental designs, the experiments must have: 1) used good experimental designs; and 2) compared the intervention to another treatment, including a pill or psychological placebo or to another treatment. Additionally, according to APA, experiments must be conducted with treatment manuals; characteristics of the client samples must be clearly specified; and effects must have been demonstrated by at least two different investigators or investigating teams.

According to APA (1998), Probably efficacious treatments as those which fulfill the following criteria (APA, 1998): 1) Two experiments showing the treatment is superior (statistically significantly) to a waiting-list control group; or 2) one or more experiments meeting the criteria of that for well-established treatments, with the exception that the effects do not have had to have been demonstrated by at least two different investigators or investigating teams, or 3) a small series of single case design experiments (n >3) otherwise meeting the criteria for well-established treatments.

These APA criteria are important to consider when evaluating treatments for psychological disorders generally, and for sexual dysfunction – such as HSDD – specifically.
No established or efficacious treatments for Sexual Desire Disorders.

Empirical research investigating treatments for sexual dysfunctions is sparse, particularly in the area of the desire disorders (Heiman & Meston, 1997). To date, no well-established treatments or probably efficacious treatments exist for the treatment of LSD or HSDD in women. Instead, much of what is published about LSD and HSDD is based upon clinical experience, case studies, and commonly held beliefs about treating low sexual desire (Trudel, Marchand, & Ravart, 2001), and currently no standard treatment approach exists (Ullery, Millner, & Willingham, 2002). The studies that do exist often contain numerous flaws in design and methodology, including a lack of control groups and lack of treatment manuals (Heiman & Meston, 1997). To date, only three controlled outcome studies on the treatment of HSDD or LSD exist, all pertaining to group treatment of the disorder.

Three empirical studies on group treatment for LSD or HSDD. A recent review of the research on treatments for desire disorders revealed only three controlled outcome studies which utilized multimodal techniques in face-to-face interventions (Brotto, Basson, & Luria, 2008; Hurlbert, 1993; Trudel et al., 2001). All studies concerned diagnosable rather than self-defined problems. Hurlbert (1993) diagnosed participants with HSDD utilizing DSM-III-R diagnostic criteria, and Trudel et al. (2001) diagnosed participants with HSDD utilizing DSM-IV diagnostic criteria. In Brotto et al. (2008)’s study, participants were diagnosed with sexual desire/interest disorder and/or sexual arousal disorder using Basson et al.’s (2003) recommended revised definitions of existing DSM criteria for sexual desire and arousal problems. Due to their length and
complexity, these recommended revisions will not be discussed in detail for the purposes of this study.

Additionally, although Heiman and Meston (1997) did not include Hurlbert’s (1993) study in their review of empirical research investigating treatments for the sexual dysfunctions, Hurlbert’s (1993) outcome study may add to the knowledge base surrounding effective interventions for desire disorders.

Hurlbert (1993) compared a standard group therapy treatment to a standard group therapy plus orgasm consistency training. Both groups were couples groups with the women in the couples having a diagnosis of HSDD. Hurlbert (1993) hypothesized that relationship rather than individual factors primarily influence the development and course of HSDD and therefore utilized interventions (group therapy or group therapy plus orgasm consistency training) which targeted both partners in heterosexual relationships. Standard group therapy combined aspects of marital and sexual therapy by utilizing cognitive and behavioral techniques such as creating behavior-exchange contracts to increase the number of positive couple interactions, enhancing positive touch between couples, and teaching conflict resolution and communication skills. Orgasm consistency training involved sensate focus (non-goal directed touching), directed masturbation, self-control techniques for men, and information regarding orgasm timing for men. All female participants (N = 39 women between the ages of 28 and 38) and their male partners attended eight two-hour standard group therapy sessions, with 11 of the 39 participants randomly assigned to also receive the orgasm consistency training, which added 30-45 minutes to the total intervention time of 16 hours. Participants completed measures of sexual desire, sexual satisfaction, sexual arousal, and sexual assertiveness at pre-
treatment, post-treatment (eight weeks later), and at three and six month follow-ups. At post-treatment, all participants improved on two of the four measures of sexual behavior; specifically, they improved on sexual desire and sexual arousal but not on sexual satisfaction and sexual assertiveness. The women in the group therapy plus orgasm consistency training reported greater sexual arousal and sexual assertiveness immediately following the treatment and at three and six month follow-ups as compared to those in the standard group therapy treatment alone (Hurlbert, 1993). While this study (Hurlbert, 1993) may demonstrate some support for the use of group therapy and orgasm consistency training as treatments for HSDD in women, it did not include a control group. In addition, this treatment also requires significant commitment and involvement on the part of women and their partners.

Trudel and his colleagues (2001) implemented a controlled multimodal study on the effects of group cognitive-behavioral therapy designed to address the complex etiological factors involved in the development of HSDD. Seventy-four couples in which the woman suffered from HSDD were enrolled, with 38 couples in the wait-list control group, and 36 couples in the 12 week cognitive-behavioral group. The treatment program involved understanding the causes of HSDD, couple sexual intimacy exercises, communication training, cognitive restructuring, sensate focus, sexual fantasy training and mutual reinforcement training. At the end of the study, 74% of the women in the cognitive-behavioral group either reported improved symptoms of HSDD or were considered symptom free. Twenty-eight percent of the 74% no longer reported symptoms of HSDD at the end of treatment, while the other 46% reported experiencing improved symptoms. When assessed at both three month and one year follow-ups, 64% of the
women in the treatment group indicated that they were either symptom free or improved (Trudel et al., 2001). While these results are encouraging, more research should be done to fully explore the effects of cognitive-behavioral therapy on the treatment of HSDD. Furthermore, a less intensive treatment may be beneficial for the large numbers of women experiencing symptoms of LSD or HSDD. In fact, one criticism of the Trudel et al. (2001) study was that participants provided feedback that the program was too intensive and disclosed that they were sometimes unable to complete the homework from the group. In addition, this treatment also requires the presence of a romantic partner. Also of concern, less than half (38%) of all female participants reported being completely symptom free at the one year follow-up, which is relatively small given the intensity of the program (Trudel et al., 2001).

More recently, Brotto, Basson, and Luria (2008) investigated the effects of a brief, three session group treatment for sexual arousal and/or sexual desire disorders in women. This group was implemented using a manualized treatment that integrated elements of psychoeducation, cognitive-behavioral therapy, sex therapy, relationship therapy, and mindfulness. Participants were also given homework to complete in between sessions. Twenty-six female participants meeting criteria for a sexual arousal and/or a sexual desire disorder attended three, 90-minute group sessions that were each spaced two weeks apart. Before and after each session, participants viewed audiovisual erotic stimuli and then completed self-report measures assessing subjective sexual desire, sexual arousal, overall sexual functioning (or sexual response), sexual distress, mood, and relationship satisfaction. Physiological measures assessing vaginal pulse amplitude (sexual arousal) were also used. Results indicated that post-intervention, participants in the group reported
significantly higher levels of sexual desire and significantly lower levels of sexual
distress than prior to the intervention. Although this research seems promising, this study
did not include a control group and utilized a small sample of participants. In addition,
although overlap often exists between sexual desire and sexual arousal disorders, the
authors did not distinguish between these two concerns in the selection of their
participants.

**Summary of limitations of current treatments for LSD or HSDD.** A dearth of
research exists which has investigated treatments for LSD or HSDD in women. The
treatments which do exist tend to be costly and time intensive on the part of both the
clinician and the client (Ullery et al, 2002). In the case of Hurlbert’s (1993) study,
implementing a group intervention and orgasm consistency training requires specialized
training on the part of the clinicians and heavy involvement by the participants. In Trudel
et al.’s (2001) treatment study, one of the primary concerns listed by participants
following the intervention was the amount of time and energy required by the
intervention. Furthermore, such treatments offered outside of clinical trials typically
require a great deal of financial investment on the part of the client, limiting its ability to
impact large numbers of women. While Brotto et al.’s (2008) intervention may be more
feasible to implement than either Hurlbert (1993) or Trudel’s (2001) treatment programs,
the impact is still less far-reaching than minimal intervention strategies such as
bibliotherapy. With epidemiological studies reporting lifetime prevalence rates of LSD in
women ranging from 20 to 52% (Laumann, Michael, & Kolata, 1995; Laumann et al.,
1999; Shifren, Monz, Russo, Segreti, & Johannes, 2008; West et al., 2008), a much more
widely-accessible, cost-effective treatment is needed.
**Bibliotherapy: A Potentially Effective and Accessible Treatment**

One treatment modality capable of reaching large audiences with relative low cost is bibliotherapy. According to Norcross (2006), more people read a self-help book than seek help from a mental health professional in a given year, and an average of 2,000 self-help books are produced each year. Often, individuals in need of psychological treatment do not seek help. The World Health Organization (WHO) (2004) estimates that around 85% of Americans with diagnosable mental health or substance abuse disorders will not receive treatment within a given year. Epidemiological studies on the prevalence of sexual dysfunctions confirm these estimates as they relate to sexual problems (Laumann et al., 1999; Rosen et al., 2009). Laumann et al. (1999) found that only 20% of the women in their study who reported symptoms of sexual dysfunction sought help from a medical professional. Rosen et al. (2009) reported that 26% of their sample of 10,429 women with sexual concerns had discussed these issues with a healthcare provider, and 74% sought informal help, acquired information about their concerns from media sources, or sought no help at all. Given some individuals’ reticence to seek professional help for sexual dysfunctions, bibliotherapy may be one way to reach large audiences while delivering sound empirical information and interventions in a cost-effective manner. In actuality, the field of sex therapy has developed numerous “minimal intervention” or self-help strategies for sexual dysfunctions over the past four decades (van Lankveld, 2009). The use of such minimal intervention is supported theoretically by Annon’s (1974) PLISSIT model.

**PLISSIT model as a treatment approach.** A theoretical model which offers a sound rationale for the use of minimal intervention strategies is the PLISSIT model for treating sexual dysfunctions (Annon, 1974). This model is grounded in learning theory
and is based upon the assumption that most sexual difficulties can be resolved with minimal interventions (Annon, 1976). Furthermore, this model is based on the notion that the intensity of a sexual concern should be matched with the appropriate level of therapeutic intervention. Annon (1976) posited that most sexual dysfunctions primarily result from learned behaviors in a sex negative culture. He used learning theory to suggest that if sexual dysfunction occurs through learning, such behaviors can be unlearned (Annon, 1976). While Annon (1976) did not deny the impact of biology, genetics or physiology, he hypothesized that “sociopsychological influences” determine the “form and direction” that sexual dysfunctions ultimately take (p. 12).

In Annon’s (1974) PLISSIT model, P refers to Permission, LI to Limited Information, SS to Specific Suggestions, and IT to Intensive Therapy. Permission refers to the normalization of sexual concerns, or learning that it is okay to have sexual thoughts and to engage in sexual behaviors. Annon (1976) hypothesized that individuals would experience a sense of relief at just knowing that they are not abnormal. The second component of the model, Limited Information, refers to individuals’ obtaining information about human sexuality, normative trends in sexual behaviors and experiences (such as the decline in sexual performance that occurs with age), and psychoeducation surrounding particular concerns. Specific Suggestions pertains to information about interventions for specific sexual dysfunctions, which may be obtained individually or from a health professional. The last component of the model, Intensive Therapy, is required far less frequently than the prior three steps (Annon, 1976). Ultimately, Annon (1976) hypothesized that 80-90% of sexual problems can be resolved using the first three steps in the model.
Using learning theory, Annon (1976) described two chains of behavior, B-L-A, and T-L-A to describe the development of sexual problems. B-L-A refers to Behavior, Label, Anxiety, and T-L-A refers to Thought, Label, Anxiety. He posited that in a sex negative society, individuals learn to apply negative labels to their own sexual behaviors and thoughts, which result in feelings of anxiety. By giving individuals permission, limited information and specific suggestions, most individuals can “break the learning chains” and move into healthy sexual functioning (Annon, 1976). A smaller group of individuals may require intensive therapy. Studies examining the effectiveness of bibliotherapy for sexual dysfunctions are certainly consistent with Annon’s theoretical model.

**Summary of studies examining bibliotherapy for sexual dysfunctions.**

Consistent with Annon’s (1974) model, bibliotherapy for sexual dysfunctions has the potential to address the first three steps of the PLISSIT model, Permission, Limited Information, and Specific Suggestions. According to Annon (1976), these three steps would be sufficient to help most individuals resolve their sexual difficulties. Only one study (Mintz et al., 2010) has been conducted on bibliotherapy for low sexual desire, although three meta-analyses have been performed summarizing the effectiveness of bibliotherapy for sexual dysfunctions more generally (Gould & Clum, 1993; Marrs, 1995; van Lankveld, 1998).

One meta-analysis (Gould & Clum, 1993) containing 40 self-help studies for a variety of problems included one study on bibliotherapy for sexual dysfunctions. This study (Dodge, Glasgow, & O’Neill, 1982) included in Gould and Clum’s (1993) meta-analysis, involved bibliotherapy for the treatment of female orgasmic dysfunction. While
the authors of the original study (Dodge et al., 1982) did not provide an effect size for their results, Gould and Clum (1993) reported calculating an effect size of 1.86 (Cohen’s $d$). The effect size found for all other non-sexual psychological concerns included in the meta-analysis was .76 (Gould & Clum, 1993).

A second meta-analysis, performed by Marrs (1995), included a total of 70 studies investigating the effectiveness of bibliotherapy for mental health concerns. Four studies investigating bibliotherapy for sexual dysfunction were included, which Marrs (1995) reported as yielding an average effect size of 1.28 (Cohen’s $d$), the highest of all problems studied. The effect size for the total sample was 0.57 (Marrs, 1995). None of the included studies on sexual dysfunctions were focused on desire disorders.

Finally, van Lankveld (1998) conducted a meta-analysis of bibliotherapy as a treatment for sexual dysfunctions, specifically, which included 12 studies. Again, none of these 12 studies focused on desire disorders. The total effect size for all studies was .68 (Cohen’s $d$) compared to no treatment groups (van Lankveld, 1998). While the exact reason for the difference between earlier effect size estimates is not known, van Lankveld (2009) asserted that this may be due to the fact that a larger number of studies were included in the more recent meta-analysis. Regardless, bibliotherapy seems like an effective method for helping individuals deal with sexual concerns. Still, the evaluation of bibliotherapy interventions for desire disorders is sorely lacking.

**Bibliotherapy for low sexual desire.** Prior to the current study, only one controlled outcome study had been conducted investigating bibliotherapy as a treatment for low sexual desire in women. This study (Mintz et al., 2010) examined the effectiveness of a self-help book entitled *A Tired Woman’s Guide to Passionate Sex*
(Mintz, 2009) at improving participants’ scores on measures of sexual desire, sexual arousal, and other aspects of sexual functioning (e.g., satisfaction, overall functioning). Forty-five women living in the Midwestern United States near a large, public, state University were recruited through University advertisements. Participants were between the ages of 29 and 57, were married, heterosexual and experiencing low sexual desire. All women were randomized to either the intervention group or the wait-list control group. Those in the intervention group received a copy of A Tired Woman’s Guide to Passionate Sex (Mintz, 2009), a self-help book for women with low sexual desire, and those in the wait-list control group were informed that they would receive a copy of the book in 6 weeks.

A Tired Woman's Guide to Passionate Sex (Mintz, 2009), is a 237-page self-help book with three foundational chapters (author’s story; causes of low sexual desire; physical and emotional benefits of sex) and five chapters comprising a psychoeducational and cognitive-behavioral treatment approach. In the third foundational chapter (i.e., benefits of sex), readers are asked to engage in an exercise designed to increase their motivation to engage in the intervention that centers on embracing their own personal motivations for increasing their sex drive. The six-step treatment, titled Five T’s and a Bit of Spice, is based on the research, theoretical, and clinical literature on low sexual desire among women as well as the author’s clinical experience. Specifically, the steps are: Thoughts, Talk, Time, Touch, Spice, and Trysts. The Thoughts step entails cognitive restructuring regarding sexual desire and motivation, as well as instructions on mindfulness practices to be used during sexual encounters. The Talk step provides general and sexual communication skills training. The Time step provides strategies for
goal setting and time management, as well as suggestions regarding self-care and couple time. The *Touch* step provides information on women’s sexual responses, as well as activities focused on affectionate and non-goal directed touching. In the *Spice* step, readers are given a variety of suggestions to enliven their sex lives. The final, *Tryst* step, counters the myth of spontaneous sex and provides suggestions for making time for sexual encounters.

In Mintz et al’s (2010) study, all participants were administered online measures of sexual desire, sexual arousal, and other aspects of sexual functioning (e.g., satisfaction, overall functioning, orgasm, lubrication, and pain) as assessed by the Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992) and the Female Sexual Function Index (FSFI; Rosen et al, 2000) at the beginning of the study. Participants in the intervention group were instructed to read *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) over a period of six weeks, while those in the wait-list control group were told that they would receive a copy of the intervention in six weeks. Three weeks into the study, those in the intervention group responded to an online questionnaire which assessed their impressions of the intervention thus far, as well as if they had done anything aside from reading the book to address their concerns with low sexual desire. Those in the wait-list control group received an email reminding them that in an additional three weeks, they would receive a copy of the self-help book, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009). Six weeks following the administration of the intervention, all participants were again asked to respond to a set of online measures assessing their sexual desire, sexual arousal, and other aspects of sexual functioning, including the HISD (Apt &
Hurlbert, 1992) and the FSFI (Rosen et al., 2000). At a seven week follow-up, participants in the intervention group again completed the study’s measures.

Results indicated that participants in the intervention group reported significantly greater gains over time in sexual desire, sexual arousal, sexual satisfaction, and overall sexual functioning than those in the wait-list control group by the end of the study. Gains in sexual desire and functioning were maintained at the seven week follow-up. On one of the two measures assessing sexual desire, the Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992), participants’ scores in the intervention group increased from 36.06 at pre-test to 55.44 at post-test, and participants’ scores in the control group did not change in a statistically significant manner, with scores beginning at 35.34 and ending at post-test at 37.00, $F(1, 43) = 42.6$, $p < .001$, $\eta^2 = .50$. The power was 1.0, and the post-test ES was 1.19. On the second measure of desire, the Female Sexual Functioning Index (FSFI; Rosen et al., 2000) Desire Subscale, the Intervention Group mean increased from 2.37 at pre-test to 3.79 at post-test, whereas the Control group mean decreased from 2.59 at pre-test to 2.47 at post-test, $F(1, 43) = 38.47$, $p < .001$, $\eta^2 = .47$. The power was 1.0. Cohen’s $d$ was 1.36. Regarding sexual arousal, the intervention group’s scores on the FSFI (Rosen et al., 2000) Arousal Subscale increased from 3.55 at pre-test to 5.05 at post test, while the control group’s scores did not statistically differ from pre-test to post-test (3.25 at pre-test and 3.33 at post-test), $F(1, 43) = 11.06$, $p < .01$, $\eta^2 = .16$. In terms of sexual satisfaction, the intervention group’s scores on the FSFI Satisfaction Subscale increased from 3.88 at pre-test to 4.88 at post test, while the control group’s scores did not statistically increase over time (2.89 at pre-test and 3.22 at post-test), $F(1, 43) = 22.27$, $p < .001$. Finally, the intervention group made statistically significant gains
on the overall measure of sexual functioning, the FSFI Total Score, as compared to the control group. The intervention group’s mean was 22.72 at pre-test, and 29.41 at post-test, while the control group’s mean was 21.17 at pre-test and 24.27 at post-test, $F(1, 43) = 8.85$, $p < .01$, $\eta^2 = .17$. At the seven week follow-up, participants in the intervention group maintained their gains in sexual desire and overall sexual functioning from post-intervention (Mintz et al., 2010). Clearly, Mintz’s self-help intervention seems to be effective, based on this initial study. Additional research is needed, and this was the purpose of the current study.

**The Current Study**

In an attempt to advance the literature in the area of treatments for LSD in women, the present study tested the effectiveness of *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) at increasing participants’ reported levels of sexual desire, sexual arousal, and other aspects of sexual functioning (e.g. overall sexual functioning, orgasm, pain, lubrication, and sexual satisfaction) as compared to a wait-list control group and a similar, untested treatment (i.e., another popular press book for low sexual desire entitled *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*; Hall, 2004). Along with including a second, comparison treatment, the current study recruited an adequate number of participants (N=45), randomized to condition, and included assessments with strong psychometric properties. This methodological design is directly in line with van Lankveld’s (2009) suggestions for improvements in research design (e.g. including control groups, randomly assigning participants to groups, utilizing assessments with strong psychometric properties, and including adequate numbers of participants) for studies investigating bibliotherapy as a treatment for sexual dysfunction.
Additionally, and of much importance, including another form of treatment as a comparison to Mintz’s self-help intervention is based in the American Psychological Association’s (1998) previously-discussed criteria for empirically validated treatments. Specifically, in order to be recognized as a well-established treatment, at least two quality between group design studies must be conducted that demonstrate an intervention’s advantage over an active control (or psychological placebo) or another treatment, or demonstrate equivalence to an already established treatment. In order to be established as a probably efficacious treatment, an intervention must be shown to be superior to a wait-list control using two separate experiments. Past research has already demonstrated that A Tired Woman’s Guide to Passionate Sex (Mintz, 2009) is a superior treatment for low sexual desire as compared to a wait-list control group (Mintz et al., 2010). The current study compared A Tired Woman’s Guide to Passionate Sex as an intervention for low sexual desire to both a wait-list control group and a second treatment group. Adding another treatment group enhanced the methodological quality of the present study and potentially added support to its being labeled as a well established treatment (i.e., pending a second study).
Chapter Three: Method

The current study explored the effects of bibliotherapy as a treatment for low sexual desire in women. Specifically, this study investigated whether the popular press self-help book entitled *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) was effective at increasing participants’ scores on measures of sexual desire, sexual arousal, and other aspects of sexual functioning (e.g., satisfaction, overall functioning), when compared to participants in both a second intervention group and a wait-list control group. Participants who read *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) will be referred to as the Mintz Intervention (MI) group. Those in the second intervention group who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004) will be referred to as the Hall Intervention (HI) group. Those in the Wait List Control group will be referred to as the WLC group.

The five sections of this chapter describe the study’s methodology. First, the participants of the study are described. Next, the study’s measures are explained, including psychometric properties. The study’s procedure is then detailed, followed by a description of the two bibliotherapy interventions. Finally, analyses used to test primary hypotheses are outlined.

Participants

Fifty-five women initially enrolled in the study. All participants were randomly assigned to either the MI ($N = 19$), HI ($N = 19$), or WLC ($N = 17$) groups. Two participants in the MI group did not complete the pre-test measures, and four participants in the MI group did not complete the post-measures, resulting in thirteen women being included in the final MI sample. One participant in the HI group did not complete the pre-
test measures, resulting in eighteen women being included in the final HI sample. Two participants in the WLC group did not complete the pre-test measures, and one participant in the WLC group did not complete the post-measures, resulting in fourteen women being included in the final WLC sample. Post-test attrition rate for the combined intervention groups was 10.5%. Post-test attrition rates for the MI and HI groups were 23.5% and 0%, respectively. Post-test attrition rate for the WLC group was 6.7%.

Additionally, five women were considered for exclusion due to some of their responses on the Guided Inquiry (a qualitative questionnaire given post-intervention). Specifically during the course of the study, a) one participant indicated that she had spoken with her OBGYN about her low sexual desire; b), one participant had become pregnant; c), one participant reported having had one session with a counselor to address her low sexual desire; d), one participant had been ill for 3 weeks; and e) one participant had only read roughly 16% of *A Tired Woman’s Guide to Passionate Sex*. A sixth participant was considered for exclusion because she had not received the letter in the mail at the beginning of the study informing her that she had been randomly assigned to the WLC group. When this issue was brought to the researcher’s attention by the participant, the participant was emailed an electronic copy of the letter. This was done because the participant contacted the researcher after a few weeks of the study had already passed, and the time to send out three week reminder emails that the study would end in three weeks was approaching. The study’s primary statistical analyses (three group repeated measures ANOVAs) were conducted for each dependent variable both with and without the above participants, and the study’s results did not significantly change. The
above participants were therefore included in the analyses, resulting in a total of 45 women being included in the final sample.

All participants identified as heterosexual and married. Participants were married for a range of one to 34 years, with a mean of 14.98 years. As seen in Table 1, participants ranged in age from 29 to 57, with a mean age of 42.64. The majority of participants identified as White (91.1%), while 2.2% identified as African American, 4.5% identified as Biracial/Multiracial, and 2.2% identified as Asian/Pacific Islander. The sample endorsed a wide range of educational backgrounds, with 4.4% having completed high school, 4.4% having completed some college, 11.1% having received an Associate’s Degree, 28.9% having obtained a Bachelor’s Degree, 17.8% having had some graduate or professional training, 17.8% having received a Master’s Degree, 11.1% having obtained a Doctoral Degree, 2.2% having obtained an Advanced Professional Degree, and 2.2% having endorsed “Other” education. The vast majority was employed (97.8%), with 91.1% of the total sample working full-time, and 6.7% working part-time. Participants’ annual incomes ranged from $25,000 to $100,000 and above, with 6.7% reporting a yearly household income of $25,000 to $50,000, 33.3% reporting an annual income of $50,000 to $75,000, 35.6% reporting an annual income of $75,000 to $100,000, and 24.4% reporting annual incomes of $100,000 or more per year. The majority of the sample (71.1%) identified as Christian, while 13.3% identified as Non-religious, 4.5% identified as Agnostic, and 11.1% endorsed “Other” for religious affiliation. Over half (62.2%) of participants reported having children living at home. About 15.6% of participants reported feeling “minimally stressed,” 57.8% reported feeling “somewhat stressed,” and 26.7% reported feeling “quite stressed.”
Measures

The primary outcome variables (sexual desire, sexual arousal, and other components of sexual functioning, including overall sexual functioning) were assessed using the self-report measures, The Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992) and the Female Sexual Function Index (FSFI; Rosen et al., 2000).

**Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992).** This self-report measure contains 25 items and assesses an individual’s level of reported sexual desire. It measures the emotional, behavioral, and cognitive aspects of sexual desire. It contains items such as “It is difficult for me to get in a sexual mood” and “My desire for sex should be stronger.” Items are rated 0 to 4 on a Likert-type scale, with scores from 0 to 100. Higher scores indicate higher levels of sexual desire. This scale also has good concurrent, construct and discriminant validity (Beck, 1995). Its two week test-retest validity is exceptional ($r = .86$) and it has good internal consistency ($a = .89$) (Beck, 1995). This instrument was originally developed by Apt and Hurlbert (1992) and was validated on a population of military wives. The scale has been used primarily by the original authors for their research. Therefore, lack of independent validation for use in clinical and community samples presents one limitation for the use of this particular measure.

**Female Sexual Function Index (FSFI; Rosen et al., 2000).** The FSFI is a 19 item self-report measure (Rosen et al., 2000) that generates an overall score of female sexual function as well as scores on five domains of sexual functioning including desire, arousal, lubrication, orgasm, satisfaction and pain. Total scores reflect an overall assessment of sexual functioning and range from 2 - 36. The FSFI subscales have score
ranges as follows: Desire 2 - 6; Arousal 0 – 6; Lubrication 0 – 6; Orgasm 0 – 6; Satisfaction 0 – 6; and Pain 0 – 6. Higher scores indicate better sexual functioning.

The original purpose of the FSFI was to provide an assessment of various aspects of female sexual functioning for use in clinical trials. Since its development, it has been widely recognized as an instrument capable of screening for female sexual dysfunction that possesses clear and precise wording and succinctness while still offering strong validity (Meyer-Bahlburg & Dolezal, 2007). In addition, it has been used in a diverse set of studies and populations and has been translated into other languages. Items on the FSFI were originally developed by a multidisciplinary team of professionals with special expertise in female sexual dysfunction. The authors selected the items in the inventory based upon their relevance to Female Sexual Arousal Disorder (FSAD), a disorder that overlaps with Hypoactive Sexual Desire Disorder (HSDD; American Psychiatric Association, 2010).

Rosen at al. (2000) utilized a sample of 131 participants in a control group and 128 age-matched participants who met the criteria for Female Sexual Arousal Disorder (FSAD) as described by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) in the validation of the instrument. Rosen and colleagues administered the FSFI to their sample of participants at five separate research centers. Their sample was comprised of participants who ranged in age from 21 to 69 and were similar in terms of education level, race, income, and number of children. The mean age of participants in the control group was 39.7, and the mean age of participants in the FSAD group was 40.5. The racial composition of the control group was 76.3 percent European American, 11.5 percent African American, 8.4 percent
Hispanic, 3.1 percent Asian, and 0.8 percent “Other”. The racial composition of the FSAD group was 76.6 percent European American, 10.9 percent African American, 0.8 percent Native American, 7.0 percent Hispanic, 3.9 percent Asian, and 0.8 percent “Other.” In both groups, over 57 percent of the women had children. In the control group, 51.2 percent of the women had incomes that were less than $50,000 a year. In the FSAD group, 46.9 percent of the women had incomes that were less than $50,000 a year.

Factor analyses confirmed the presence of five domains, with two items assessing sexual desire, four items assessing sexual arousal, four items assessing lubrication, three items assessing orgasm function, three items assessing sexual satisfaction, and three items assessing sexual pain. An example of an item assessing for sexual desire is, “Over the past 4 weeks, how often did you feel sexual desire or interest?” An example of an item assessing for sexual arousal is, “Over the past 4 weeks, how often did you feel sexually aroused ("turned on") during sexual activity or intercourse?” An example of an item assessing for sexual satisfaction is, “Over the past 4 weeks, how satisfied have you been with your overall sexual life?”

Test-retest reliability across two to four weeks for the total scale was acceptable ($r = .88$), as was test-retest reliability for the individual domains ($r = .79$ to .86). Internal consistency was sufficient for both the total scale ($\alpha = .97$) and the individual domains ($\alpha = .89-.96$ for the full sample of participants). Pearson product-moment correlations were performed between participants’ total FSFI scores and their scores on the Locke-Wallace Marital Adjustment Test, and the correlation between the measures was generally modest. The correlation between the two measures was very low for the clinical sample
and low to moderate for the control group, which according to the authors, demonstrated divergent validity and offered support for construct validity (Rosen et al., 2000).

Additional research (Meston, 2003) demonstrated the ability of the FSFI to reliably discriminate between participants diagnosed with DSM-IV defined Hypoactive Sexual Desire Disorder (HSDD) and matched controls and those diagnosed with Female Orgasmic Disorder (FOD) and matched controls. More recently, researchers (Weigel, Meston & Rosen, 2005) provided additional support that both the total and domain scores of the FSFI reliably discriminate between women with sexual dysfunctions and women without sexual dysfunctions. In their research, they included a diverse sample of women with Female Sexual Arousal Disorder (FSAD), Hypoactive Sexual Desire Disorder (HSDD), Female Sexual Orgasm Disorder (FSOD), dyspareunia/vaginismus (sexual pain), and women with multiple sexual dysfunctions. Using this sample, they established cutoff scores differentiating women who were and were not suffering from sexual dysfunction. They established a cutoff score of 26.55 on the FSFI Total Score, which differentiated those who were suffering from sexual dysfunction and those who were not. Specifically, they reported that those who received scores above 26.55 were not suffering from symptoms of sexual dysfunction.

**Demographic questionnaire.** This 20 item questionnaire asks participants to provide information on their age, race/ethnicity, education level, sexual orientation, marital and employment status, partner’s employment status, annual yearly income (as a measure of socioeconomic status), religious affiliation, number of children in the household, and average rating of daily stress (from minimally stressed to extremely
stressed on a 4 point scale). A copy of the demographic questionnaire can be found in Appendix A.

**Motivational questionnaire.** This three item questionnaire asks participants about their motivation to increase their sexual desire and their confidence in their ability to do so. The measure was generated by this researcher. Questions included: 1) “How important is it to you to increase your sexual desire?”; 2) “How confident are you in your ability to increase your sexual desire?”; and 3) “How motivated are you to work on increasing your sexual desire?” Items were answered on a five-point Likert-type scale, with responses ranging from “not at all” (important, confident, or motivated) to “very” (important, confident, or motivated). A copy of the motivational questionnaire can be found in Appendix B.

**Guided Inquiry, adapted version (GI; Heppner et al., 1992).** This eight item questionnaire was adapted from Heppner et al.’s (1992) nine item open-ended questionnaire, the Guided Inquiry (GI). The original GI was developed to assess clients’ perceptions of the counseling process. The adapted GI includes similar questions to the original GI, although its questions have been changed to inquire specifically about the two studied bibliotherapy interventions. Questions asked participants to describe aspects of their respective interventions which they believed to be either improving or detracting from desire as well as inquired about general perceptions of the books (e.g. most helpful thing read). Participants were also asked to indicate if they had finished reading their self-help book, and if so, up to what page they had read, and if they had done anything else outside of the study to address their low sexual desire. These additional questions were included in order to determine if efficacy of the interventions was impacted by treatment.
adherence (e.g. book completion) or outside factors (e.g. medical treatment). A copy of the Guided Inquiry, adapted version can be found in Appendix C.

**Procedures**

Prior to recruiting participants, a power analysis was conducted to determine the number of participants needed for the present study. Previous effect sizes from five studies investigating bibliotherapy as a treatment for sexual dysfunctions were gathered and reviewed in order to more accurately estimate the population effect size for the current intervention. The reason that studies on all sexual dysfunctions, rather than only low sexual desire, were used for the power analysis is because a paucity of research exists on bibliotherapy for low sexual desire, with only one study having been conducted on this topic (Mintz et al., 2010). In fact, few studies have investigated bibliotherapy for sexual dysfunction generally. Nevertheless, meta-analyses conducted using studies investigating bibliotherapy for sexual dysfunction have typically yielded large effect sizes (Gould & Clum, 1993; Marrs, 1995; van Lankveld, 1998). However, most of these studies either compare participants in bibliotherapy groups to waiting list control groups or simply utilized a one group pretest-posttest design. In fact, as noted previously, the research on bibliotherapy for sexual dysfunction has been criticized for its failure to include control groups, its lack of random assignment, and small sample sizes (van Lankveld, 2009).

Meta-analyses revealed varying effect sizes, which may in part reflect the differences in methodological quality. Existing meta-analyses have revealed effect sizes in studies of bibliotherapy for sexual dysfunction ranging from the highest ES (Cohen’s $d$) of 1.86 to an ES of 0.68. In a recent study (Mintz et al., 2010) comparing those in a
bibliotherapy group to a wait-list control, an ES of 1.75 (Cohen’s $d$) was found. Only one study (Dodge, Glasgow, & O’Neill, 1982) was located that incorporated an active control into its design, and the ES between the intervention and active control group was found to be 1.86 (Cohen’s $d$), as calculated by Gould and Clum (1993) in their meta-analytic study. The current study utilized an estimated population effect of 1.00 (Cohen’s $d$) and an $\alpha$ of .05. With this effect size, it was anticipated that 44 participants would be needed in order to obtain a power of 0.82. Due to the 30% attrition rate found in the intervention group in Mintz et al.’s (2010) study on bibliotherapy for low sexual desire, it was anticipated that 54 participants would be needed in order to obtain a power of 0.81 (with an expected 10 participants from the intervention groups dropping out of the study).

Following approval by the Campus Institutional Review Board, a mass announcement email was sent out through the University including the tagline, “Seeking Women with Diminished Sexual Desire for Intervention Study.” The advertisement explained that participants would receive a free copy of one of two self-help books for low sexual desire in women. They were not informed of the title of the self-help books in the advertisement (see Appendix D for a copy of the advertisement). Participants were informed in the advertisement that they would be asked to fill out questionnaires on sexual desire, sexual arousal, and other aspects of sexual functioning, which may be rather personal. In order to enroll, they were instructed to either email or call the primary researcher. Participants who contacted the researcher and requested more information about the study were read over the phone or emailed a script with information about the study (see Appendix E for the script). This script did not contain any more information than what was contained in the informed consent. Participants who requested to be
enrolled in the study were emailed an enrollment email reminding them of the criteria for participation (they must be a married, heterosexual female between the ages of 28 and 58 who is experiencing low sexual desire but is generally happy with her marriage). The enrollment email also informed participants that they would receive an email with information about beginning the study after the two-week enrollment period had ended (see Appendix F for enrollment email).

All participants who contacted the researcher within the two weeks after the advertisement was run were entered into the study on the same day. As only 35 participants had been recruited following the first recruitment period (with 33 completing the pre-test measures), the advertisement was run again and the same recruitment procedure followed. After the second advertisement was run, 11 participants were enrolled and completed the pre-test measures. A total sample size of 44 participants was not deemed sufficient given the anticipated 30% attrition rate in the intervention groups. A previously conducted power analysis had determined that 54 participants would be necessary in order to obtain adequate power given expected attrition. Thus a third two week recruitment period was begun, in which ten additional participants were enrolled, with nine completing the pre-test measures. This recruitment period was identical to the prior two with one exception. The third recruitment advertisement’s tagline read: “Lacking Libido? Reclaim your Sexual Desire.” The advertisement’s tagline was changed in an attempt to sound more appealing to participants and thus recruit the participants necessary to obtain an adequate sample size.

Following each two week enrollment period, participants were randomly assigned to either the Mintz Intervention (MI) group, the Hall Intervention (HI) group or, the wait-

All participants were sent an email (see Appendix G) containing a link to a set of online surveys including the informed consent for the study (see Appendix H), the demographic questionnaire, the motivational questionnaire, the HISD (Apt & Hurlbert, 1992) and the FSFI (Rosen et al., 2000). Also enclosed in this survey was an additional page asking for participants’ names, email addresses, and home addresses (see Appendix I.) This information was collected so that participants could be mailed a self-help book. At this point, they were also asked to create a unique identifier so that their survey responses could be kept as separate as possible from their identifying information. If enrolled participants in any group did not respond to this, or subsequent surveys, they were sent up to three reminders each sent five days apart, asking them to complete the surveys within five days (see Appendix J). Following the completion of the first set of surveys, those in the WLC group received a letter in the mail informing them that they had been randomly assigned to the group that would receive the intervention in six weeks (see Appendix K). They were not told at this point which intervention they would be receiving in six weeks, however, so that their expectations would not unduly affect their responses to the study’s post-measures. However, all of these participants received
Mintz’s book, because it has already proved effective in past research and because it was able to be obtained at a discount price by the researcher. Participants in the MI group were mailed a copy of A Tired Woman’s Guide to Passionate Sex (Mintz, 2009), and participants in the HI group were mailed a copy of Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life (Hall, 2004). Participants in both groups received letters accompanying the books informing them of next steps involved in the study (see Appendices L and M).

Three weeks into the study, those in the WLC group were sent an email reminding them that they would receive the intervention in an additional three weeks (see Appendix N). Those in the MI and HI groups were sent emails reminding them that the study would be ending in three weeks and that they should be about halfway through their respective books (see Appendix O for the email sent to MI participants and Appendix P for the email sent to HI participants). This email also reminded them that they would be receiving a link to a set of online questionnaires in three weeks. At the end of the six week study, all participants were again emailed a link to the study’s measures, the motivational questionnaire, the HlSD (Apt & Hurlbert, 1992) and the FSFI (Rosen et al., 2000). See Appendix Q for the email sent to MI participants and Appendix R for the email sent to HI participants. Those in the MI and HI groups were also asked to complete the Guided Inquiry. All participants were debriefed after they completed the online questionnaires (see Appendix S for MI and HI debriefing and Appendix T for WLC debriefing). Participants in the WLC group received a free copy of A Tired Woman’s Guide to Passionate Sex (Mintz, 2009) with an accompanying letter (see Appendix U) following the completed 6 week study.
Mintz Intervention and Hall Intervention

The Mintz Intervention book (the primary intervention of interest), *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009), is a 237-page self-help book with three foundational chapters (author’s story; causes of low sexual desire; physical and emotional benefits of sex) and five chapters comprising a psychoeducational and cognitive-behavioral treatment approach. In the third foundational chapter (i.e., benefits of sex), readers are asked to engage in an exercise designed to increase their motivation to engage in the intervention that centers around embracing their own personal motivations for increasing their sex drive. The six-step treatment, titled *Five T’s and a Bit of Spice*, is based on the research, theoretical, and clinical literature on low sexual desire among women, as well as the author’s clinical experience. Specifically, the steps are: *Thoughts*, *Talk*, *Time*, *Touch*, *Spice*, and *Trysts*. The *Thoughts* step entails cognitive restructuring regarding sexual desire and motivation, as well as instructions on mindfulness practices to be used during sexual encounters. The *Talk* step provides general and sexual communication skills training. The *Time* step provides strategies for goal setting and time management, as well as suggestions regarding self-care and couple time. The *Touch* step provides information on women’s sexual responses, as well as activities focused on affectionate and non-goal directed touching. In the *Spice* step, readers are given a variety of suggestions to enliven their sex lives. The final, *Tryst* step, counters the myth of spontaneous sex and provides suggestions for making time for sexual encounters.

relationships. This book contains information about the author’s personal struggle with low sexual desire, education about the possible causes of low sexual desire in women (physical, psychological and social), partner communication strategies, exercises for enhancing sexual desire (e.g. sensate focus, sensual meditation, kegal exercises), and resources for gaining additional help. This book is written from a systemic-feminist perspective and encourages women to listen to and follow their internal desires rather than focusing entirely on the needs of their partner. Also from a feminist perspective, it attempts to give women permission to experience their sexual desires. This book was chosen as a second intervention because it has many similarities to the intervention book. Both are written by feminist psychologists who provide their personal story, both provide education about the causes of low sexual desire, both include a section on communication, and both include exercises for enhancing desire. They are also roughly the same length (237 versus 240 pages).

**Statistical Analyses**

In order to sufficiently discuss the statistical analyses conducted, the research questions and analyses are listed together below.

1) Participants in the Mintz and Hall Intervention groups will make significantly greater gains over time in reported sexual desire and other aspects of sexual functioning (sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning) as compared to the wait-list control group at the end of the six week study.

   a) Three group repeated measures ANOVAs were conducted for each measure of the dependent variables (the HISD Total scores, the FSFI Total
scores, and the FSFI subscales (Desire, Arousal, Lubrication, Orgasm, Satisfaction, and Pain scores) to determine if a group (MI, HI, WLC) by time (pre-test, post-test) interaction exists.

b) When group by time interactions were statistically significant, follow up contrasts were conducted comparing the WLC group to one combined treatment group containing both MI and HI participants in order to determine if receiving treatment (MI or HI) was superior to receiving no treatment (WLC). Follow-up contrasts comparing the MI to the WLC group and the HI to the WLC group were also conducted to determine if each individual intervention was superior to receiving no treatment.

2) Participants in the Mintz Intervention group will make statistically equal or greater gains over time in reported sexual desire and other aspects of sexual functioning (sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning) as compared to the Hall Intervention group at the end of the six week study.

a) As mentioned, three group repeated measures ANOVAs were conducted for each measure of the dependent variables (the HISD Total scores, the FSFI Total scores, and the FSFI subscales (Desire, Arousal, Lubrication, Orgasm, Satisfaction, and Pain scores) to determine if a group (MI, HI, WLC) by time interaction exists.

b) When group by time interactions were statistically significant, follow up contrasts were conducted comparing the MI group to the HI group in
order to determine if receiving the Mintz Intervention was superior to receiving the Hall Intervention.

c) Effect sizes for all outcome variables for which significant differences exist were also calculated based on the differences between pre- and post-test scores.
Chapter Four: Results

This chapter will describe and summarize the results of the statistical analyses used to evaluate the hypotheses of this study. First, the results of the preliminary analyses will be outlined, including data cleaning, missing data analysis, and tests of assumptions (i.e., normality, sample size, outliers). Results of the ANOVAs and Chi-square tests that examined possible baseline differences between three groups (Mintz Intervention [MI], Hall Intervention [HI], and Wait List Control Group [WLC]) in demographic and dependent variables (i.e., HISD Total score, FSFI Total scores and FSFI Desire, Arousal, Satisfaction, Lubrication, Orgasm, and Pain Subscale scores) will also be reported. Next, the major hypotheses of the study will be delineated, followed by the results of the analysis conducted to evaluate the hypotheses. Finally, post-hoc analyses will be described.

Preliminary Analyses

Data Entry and Cleaning. Data from all three groups (MI, HI, and WLC) were retrieved from Qualtrics.com online survey software where participants had originally provided their responses. Data were downloaded into the statistical program, SPSS, and were visually checked and scanned for errors. None were found. Data categories were also relabeled for clarity and conciseness. After missing data analyses were performed, total and subscale scores for FSFI and total scores for HISD were calculated using SPSS. Data were also converted into an Excel file for use in an additional statistical program, SAS.

Missing data analysis. A missing data analysis was performed for all 45 participants in the MI, HI, and WLC groups at both pre- and post-test. A total of 10
missing data points were observed across all conditions and both time points, which was considered minimal. Two missing data points were from the HISD pre-test, four were from the FSFI pre-test, three were from the HISD post-test, and one was from the FSFI post-test. No participant missed more than two items on either the pre-measures or the post-measures. The imputed expectation maximization values for missing data were estimated using statistical software and used to replace missing data points.

**Tests of assumptions.** The assumption of normality was tested for all dependent variables (FSFI Total scores, FSFI Desire, Arousal, Satisfaction, Lubrication, Orgasm, and Pain Subscale scores, and HISD Total scores) using visual inspection of histograms. All dependent variables met this assumption with the exception of the FSFI Pain Subscale at pre- and post-test, the FSFI Orgasm Subscale at pre- and post-test, and the FSFI Lubrication Subscale at post-test. The FSFI Pain (at both pre- and post-test) and Lubrication Subscale scores (at post-test) appeared somewhat negatively skewed, meaning that a greater proportion of participants experienced less sexual pain and more lubrication. FSFI Orgasm Subscale scores seemed to be widely scattered across the histogram at pre- and post-test, meaning that participants varied widely in orgasm functioning, with some very high scores and some very low scores. Having dependent variables that are not perfectly normally distributed is a common issue in social science research and typically does not present a problem when conducting analyses, especially when the sample size is greater than 30 (Pallant, 2007). This issue was therefore not further addressed using data transformation.

The data were also checked for the presence of outliers, and a number of possible outliers were discovered through the inspection of graphs. One outlier was found on the
HISD Total score at pre- and post-test, one was found on the FSFI Total score at post-test, four were found on the FSFI Pain Subscale at pre-test, and one was found on the FSFI Pain Subscale at post-test. The study’s primary analyses (repeated measures’ ANOVAs) were conducted with and without the presence of the potential outliers, and no significant difference was detected in outcome with the exception of the FSFI Pain Subscale. Specifically, prior to the removal of outliers, a repeated measures ANOVA was conducted investigating the impact of treatment condition (MI, HI, and WLC) over time for the FSFI Pain Subscale. The group by time interaction was significant $F(2, 42) = 3.71, p < .05$. Following the removal of outliers, another repeated measures ANOVA was conducted investigating the impact of treatment condition (MI, HI, and WLC) over time for the FSFI Pain Subscale. The group by time interaction was no longer significant $F(2, 38) = 1.48, p = 0.24$. For this reason, the four outliers’ scores were removed from the repeated measures ANOVAs for the FSFI Pain Subscale (one of these participants was an outlier on both pre- and post-test).

Finally, categorical demographic variables (i.e., race, religion, whether or not the participant has children, self and partner employment status) were assessed for the assumption of sufficient sample size. Chi-square assumptions state that no expected value of a cell can be less than one and that no more than 20% of the cells can have expected values less than five. This assumption was not met because of the small amount of variability in nominal demographic variables across the sample (e.g. 91.1% of participants identified as White and 97.8% were employed). Exact Chi-square tests were thus utilized in subsequent analyses because, as opposed to traditional Chi-square, these
tests do not require a specific distributional structure. An exact Chi-square test is a nonparametric method that is used when expected cells are less than five.

**Baseline differences.** One-way ANOVAS were used to test whether significant differences existed on measures of continuous dependent variables (FSFI Total and Subscale scores, HISD Total scores) at pre-test between participants in the MI, HI, and WLC groups. No statistically significant differences were observed. One-way ANOVAs were also conducted to test whether significant differences existed on continuous demographic variables at pre-test. A statistically significant difference existed between the groups on the single-item stress question at pre-test, $F(2, 42) = 3.97, p < .05$. This item reads “How stressed do you feel on a daily basis?” and responses range from “minimally stressed” (scored as 1) to “extremely stressed” (scored as 4). A follow-up contrast was conducted comparing the MI and WLC groups on the single-item stress measure, and no statistically significant differences were observed, $F(2, 42) = 1.67, p = .20$. Additionally, another follow-up contrast comparing the HI and WLC groups on the stress measure revealed no significant differences, $F(2, 42) = 2.15, p = .15$. Yet, another follow-up contrast demonstrated that significant differences existed between the MI and HI groups at pre-test on the stress measure, $F(2, 42) = 7.85, p < .01$. The mean stress score for the WLC group was 2.07 (between somewhat stressed and quite stressed), 2.39 for the HI group (between somewhat stressed and quite stressed), and 1.77 for the MI group (between minimally stressed and somewhat stressed). As the stress scale is a 1-item scale generated by the researcher where no psychometric properties are known, it is assumed that this variable did not significantly impact results of primary analyses. Additionally, a repeated measures ANOVA was conducted to determine if a group by
time interaction exists for stress, and this interaction was non-significant $F(2, 42) = 1.56, p = .22$. No other statistically significant differences were observed in continuous demographic variables at pre-test. Additionally, exact Chi-square tests were used to evaluate whether categorical demographic variables differed at pre-test, and no significant differences were observed.

One additional analysis included examining whether or not participants who were recruited using the different advertisement taglines (“Lacking Libido? Reclaim your Sexual Desire” versus “Seeking Women with Diminished Sexual Desire for Intervention Study”) differed at pre-test on the study’s dependent variables. ANOVAs were conducted to determine if differences on measures of dependent variables existed between those who were recruited using the first and second taglines at pre-test, and none were found.

Finally, independent samples t-tests were conducted to determine whether or not those who completed the post-test measures significantly differed from those who did complete the post-test measures in terms of pre-test demographic or dependent variables. No differences were found with the exception of pre-test differences on the FSFI Orgasm Subscale. On average, those who did not complete the post-test had poorer orgasm functioning at pre-test than those who did complete the post-test. Participants who did not complete the post-test had a mean orgasm score of 1.2, while those who did not complete the post-test had a mean orgasm score of 3.8.

**Primary hypotheses**

The first hypothesis of this study was that participants in the two intervention groups (the Mintz Intervention and Hall Intervention) would make statistically significant gains compared to the Control group on measures of sexual desire, sexual arousal, and
other aspects of sexual functioning (overall functioning, orgasm, pain, lubrication, and satisfaction). The second hypothesis was that participants in the Mintz Intervention group would either make statistically significant gains compared to the Hall Intervention group, or that these gains would not differ significantly from one another, but that the Hall Intervention group’s gains will not exceed those of the Mintz group gains. Both hypotheses were examined with the same overall analysis (a three-group repeated measures ANOVA) but with different follow-up contrast analyses. More specifically, first repeated measures ANOVAs were conducted comparing the three groups (MI, HI, WLC) on each of the dependent variables, including the HISD Total scores, the FSFI Total scores, and the FSFI subscales (Desire, Arousal, Lubrication, Orgasm, Satisfaction, and Pain) scores. Subsequently, if these ANOVAS were significant, to examine hypothesis one, follow-up contrast analyses were conducted comparing participants in the WLC group to a combined treatment group containing both participants in the MI and HI groups, as well as follow-up contrast analyses comparing the MI group to the WLC group and the HI group to the WLC group. These follow-up analyses were conducted to examine if receiving any treatment is superior to receiving no treatment and to examine if receiving a specific treatment (Mintz or Hall) is superior to receiving no treatment, respectively. The second hypothesis that the Mintz Intervention will result in changes over time that will exceed or be equal to the Hall Intervention was also examined with a follow-up analysis to the overall 3-way repeated measures ANOVA. That is, if the three-group (MI, HI, WLC) repeated measures ANOVA was significant, follow-up contrast analyses comparing the Mintz and Hall interventions were conducted. Finally, when significant differences between groups over time were found, Cohen’s $d$ was calculated.
as an effect size, although the method of calculation was adjusted from the traditional method to more accurately fit the data. Typically, Cohen’s $d$ is calculated by taking the difference of groups’ post-test means for the same variable and dividing that difference by the standard deviations of the variable. However, in studies with more than two groups, this method of calculating Cohen’s $d$ can mask the change actually made by participants. For this reason, the mean difference of the change from pre- to post-test for each group was instead used in the calculation of Cohen’s $d$. Standard deviations for these calculations were derived from a series of dependent samples t-tests, utilizing pre- and post-test scores. Dependent samples t-tests provide significance levels that are identical to repeated measures ANOVAs when using only two time points. The results pertaining to both hypotheses (i.e., interventions versus control; two interventions versus one another) are presented together below by dependent variable.

**HISD.** The repeated measures ANOVA comparing the three groups across time was significant, $F(2, 42) = 12.20, \ p < .001, \ ETA^2 = .18$. See Figure 1 for a graphic depiction of the interaction. A follow up contrast comparing the WLC group to one combined treatment group containing both MI and HI participants revealed that the groups that received treatment made statistically significant gains over time as compared to the WLC, $F(1, 42) = 20.68, \ p < .001$. As seen in Table 2, the combined treatment group mean increased from 32.33 at pre-test to 46.28 at post-test, whereas the WLC group mean remained relatively unchanged (30.57 at pre-test; 32.82 at post-test). Likewise, a follow-up contrast analysis comparing the MI and WLC groups revealed that those in the MI group made significantly greater changes over time than did the WLC group, $F(1, 42) = 24.20, \ p < .001$. Similarly, a follow up contrast analysis comparing the
HI and WLC groups revealed that those in the HI group made significantly greater changes over time than did the WLC group, $F(1, 42) = 8.62$, $p < .01$. A final contrast, of relevance to hypothesis two, revealed that the MI intervention resulted in greater changes over time than the Hall intervention, $F(1, 42) = 5.44$, $p < .05$. As depicted in Table 2, the MI group mean increased from 33.10 at pre-test to 50.43 at post-test and the HI group mean increased from 31.56 to 42.13. The post-test ES (Cohen’s $d$) were as follows: 1.15 for the combined treatment vs. WLC, 1.86 for the MI compared to the WLC group, 1.22 for the HI compared to the WLC group, and 0.77 for the MI compared to the Hall Intervention. See Table 3 for a summary of follow up contrasts and effect sizes.

**FSFI Total Score.** The repeated measures ANOVA comparing the three groups across time was significant, $F(2, 42) = 7.83$, $p < .01$, $ETA^2 = .19$. See Figure 2 for a graphic depiction of the interaction. A follow-up contrast comparing the WLC group to one combined treatment group containing both MI and HI participants revealed that the groups that received treatment made statistically significant gains over time as compared to the WLC, $F(1, 42) = 9.86$, $p < .01$. As seen in Table 4, the combined treatment group mean increased from 17.73 at pre-test to 23.94 at post-test, while the WLC group mean remained relatively stable (20.96 at pre-test; 21.26 at post-test). A follow up contrast comparing the MI and WLC groups revealed that those in the MI made significantly greater changes over time than did the WLC group, $F(1, 42) = 15.24$, $p < .001$. However, a follow up contrast comparing the HI and WLC revealed that those in the HI did not make significantly greater changes over time than did the WLC group, $F(1, 42) = 2.18$, $p = .15$. A final contrast, of relevance to hypothesis two, demonstrated that the MI resulted in greater changes over time than the Hall intervention, $F(1, 42) = 7.21$, $p < .05$. 
As depicted in Table 4, the MI group mean increased from 16.41 at pre-test to 25.46 at post-test and the HI group mean increased from 19.05 to 22.41. The post-test ES (Cohen’s $d$) were as follows: 1.10 for the combined treatment vs. WLC, 1.64 for the MI compared to the WLC group, and 0.83 for the MI compared to the Hall Intervention. See Table 5 for a summary of contrasts and effect sizes.

In regard to clinical cut-off scores for the FSFI Total Scores, Weigel and colleagues (2005) reported that a score of 26.55 differentiates women experiencing DSM-defined sexual dysfunction from those not experiencing sexual dysfunction, with those above not experiencing dysfunction and those below experiencing dysfunction. As seen in Table 4, the MI group mean increased from 16.41 at pre-test to 25.46 at post-test, the HI group mean increased from 19.05 to 22.41, and the WLC group mean remained relatively stable (20.96 at pre-test; 21.26 at post-test). Thus, all participants would be labeled as experiencing sexual dysfunction by Weigel et al. (2005) at both pre- and post-test. Nevertheless, of note, by post-test the MI group was very close (25.46) to reaching the cutoff of 26.55.

**FSFI Desire Subscale.** The repeated measures ANOVA comparing the three groups across time was not significant, $F(2, 42) = 0.71, \ p = .50$. The means for all three groups increased somewhat, although the overall 3-group repeated measures ANOVA was not statistically significant. The MI group mean increased from 2.26 to 2.72 at post-test, the HI group mean increased from 2.24 to 2.37, and the WLC group mean increased from 2.19 to 2.23.

**FSFI Arousal Subscale.** Again, contrary to hypotheses, the repeated measures ANOVA comparing the three groups across time was not significant, $F(2, 42) = 1.47, \ p
The MI group mean increased from 2.65 at pre-test to 3.76 at post-test, the HI group mean increased from 2.95 at pre-test to 3.32 at post-test, and the WLC group mean increased from 3.12 to 3.56 at post-test.

The FSFI Lubrication Subscale. The repeated measures ANOVA comparing the three groups across time was significant, $F(2, 42) = 11.27$, $p < .001$, $\eta^2 = .26$. See Figure 3 for a graphic depiction of the interaction. A follow-up contrast comparing the WLC group to one combined treatment group containing both MI and HI participants revealed that the groups that received treatment made statistically significant gains over time as compared to the WLC, $F(1, 42) = 17.37$, $p < .001$. As seen in Table 6, the combined treatment group mean increased from 2.98 at pre-test to 4.59 at post-test, while the WLC mean decreased from 3.81 at pre-test to 3.54 at post-test. A follow up contrast comparing the MI and WLC groups revealed that the MI group made statistically significant gains over time as compared to the WLC group, $F(1, 42) = 22.54$, $p < .001$. Likewise, a follow up contrast comparing the HI and WLC groups revealed that the HI group made statistically significant gains over time as compared to the WLC group, $F(1, 42) = 5.91$, $p < .05$. Finally, a follow up contrast comparing the MI and HI groups revealed that the MI group made statistically significant gains over time as compared to the HI group, $F(1, 42) = 6.99$, $p < .05$. As depicted in Table 6, the MI group mean increased from 2.72 at pre-test to 5.01 at post-test, the HI group mean increased from 3.23 at pre-test to 4.17 at post-test. The post-test ES (Cohen’s $d$) were as follows: 1.19 for the combined treatment vs. WLC, 1.42 for the MI compared to the WLC group, 0.59 for the HI compared to the WLC group, and 0.85 for the MI compared to the Hall Intervention. See Table 7 for a summary of contrasts and effect sizes.
The FSFI Orgasm Subscale. The repeated measures ANOVA comparing the three groups across time was significant, $F(2, 42) = 8.50$, $p < .001$, $\eta^2 = .20$. See Figure 4 for a graphic depiction of the interaction. A follow-up contrast comparing the WLC group to one combined treatment group containing both MI and HI participants revealed that the groups that received treatment made statistically significant gains over time as compared to the WLC, $F(1, 42) = 16.94$, $p < .001$. As seen in Table 8, the combined treatment group mean increased from 2.66 at pre-test to 4.32 at post-test, while the WLC group mean slightly decreased (4.06 at pre-test; 3.91 at post-test). Additionally, a follow-up contrast revealed that the MI group made considerably greater gains across the 6-week study as compared to the WLC group, $F(1, 42) = 14.00$, $p < .001$. Likewise, a follow-up contrast revealed that the HI group made considerably greater gains across the 6-week study as compared to the WLC group, $F(1, 42) = 11.73$, $p < .001$. A final follow-up contrast demonstrated that the MI group did not make statistically greater gains in reported orgasm functioning over time than did the HI group, $F(1, 42) = 0.37$, $p = 0.55$. As depicted in Table 8, the MI group mean increased from 2.68 at pre-test to 4.49 at post-test, and the HI group mean increased from 2.63 at pre-test to 4.14 at post-test. The post-test ES (Cohen’s $d$) were as follows: 0.67 for the combined treatment vs. WLC group, 1.26 for the MI compared to the WLC group, and 1.09 for the HI compared to the WLC group. See Table 9 for a summary of contrasts and effect sizes.

The FSFI Satisfaction Subscale. The repeated measures ANOVA comparing the three groups across time was significant, $F(2, 42) = 4.45$, $p < .001$, $\eta^2 = .13$. See Figure 5 for a graphic depiction of the interaction. A follow-up contrast comparing the WLC group to one combined treatment group containing both MI and HI participants
revealed that the groups that received treatment made statistically significant gains over time as compared to the WLC, $F(1, 42) = 6.25, \ p < .05$. As seen in Table 10, the combined treatment group mean increased from 3.20 at pre-test to 4.45 at post-test, while the WLC group mean increased slightly from 3.17 at pre-test to 3.29 at post-test. A follow up contrast revealed that the MI group made considerably greater gains across the 6-week study as compared to the WLC group, $F(1, 42) = 8.83, \ p < .01$. In comparison, a follow-up contrast revealed that the HI group did not make statistically greater gains over time as compared to the WLC group, $F(1, 42) = 1.75, \ p = 0.19$. A final follow-up contrast demonstrated that the MI group did not make statistically greater gains in reported satisfaction over time than did the HI group, $F(1, 42) = 3.41, \ p = 0.07$, although the contrast between the MI and HI groups approached marginal significance. As depicted in Table 10, the MI group mean increased from 3.05 at pre-test to 4.77 at post-test, and the HI group mean increased from 3.34 to 4.12 at post-test. The post-test ES (Cohen’s $d$) were as follows: 0.84 for the combined treatment vs. WLC group and 0.54 for the MI compared to the WLC group. See Table 11 for a summary of contrasts and effect sizes.

**The FSFI Pain Subscale.** After outliers were removed from both the pre- and post-test FSFI Pain Subscales, the repeated measures ANOVA comparing the three groups across time was not significant, $F(2, 38) = 1.48, \ p = .24$. The MI group mean increased from 3.96 to 4.98 at post-test, the HI group mean decreased from 4.67 to 4.32, and the WLC group mean increased from 4.63 to 4.74. Higher scores indicate less sexual pain.
Additional Analyses

This section will explore and describe a variable that was investigated as a possible factor influencing the effectiveness of the study’s interventions, whether or not participants finished reading their respective books. Although these were not included in primary hypotheses, the results may shed additional light on the studies’ findings.

**Book completion.** A series of MANOVAs were conducted examining whether an interaction exists between book completion (if the participant did or did not complete their respective book) and all dependent variables (the HISD Total scores, the FSFI Total scores, and the FSFI subscale (Desire, Arousal, Lubrication, Orgasm, Satisfaction, and Pain) scores). A total of 31 were participants were in the MI and HI groups, although only 28 were included in these analyses because three participants did not respond to the question asking whether or not they had completed the book. No significant interactions were observed between book completion and dependent variables; the efficacy of the interventions did not appear to be influenced by whether or not a participant completed their respective book. MANOVAs were also conducted to determine if stress and motivation levels were different for those who completed versus did not complete their respective books. None of the interactions between stress or motivation and book completion were significant, although an interaction between the first motivation question (“How important is it to you to increase your sexual desire?”) and book completion was marginally significant, $F(1, 26) = 4.02, p = 0.056$. The group mean for those who did not complete the book was 4.09 at pre-test and increased to 4.55 at post-test, while the group mean for those who did complete the book was 4.00 at pre-test and decreased to 3.82 at post-test.
Chapter Five: Discussion

The purpose of this study was to test the efficacy of bibliotherapy for women experiencing low sexual desire who were married, heterosexual, and generally happy with their relationships. Two separate popular press self-help books were utilized and compared to a wait-list control (WLC) group, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) and *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004). Participants who read *A Tired Woman’s Guide to Passionate Sex* were in the intervention group referred to as the Mintz Intervention (MI) group, and those who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* were in the intervention group referred to as the Hall Intervention (HI) group. Both books were written by feminist psychologists with extensive clinical experience. Both books contain psychoeducational information and exercises aimed at alleviating symptoms of low sexual desire. This study, utilizing a randomized controlled trial design, examined whether women who received either of the two bibliotherapy treatments demonstrated significantly greater gains in overall sexual functioning, sexual desire, sexual arousal, sexual satisfaction, lubrication, orgasm, and reduction in sexual pain over time as compared to the wait-list control (WLC) group by the end of the six week study. In addition, this study also examined whether participants in the MI group made significantly equal or greater gains in these same sexual functioning constructs over time as compared to the HI group by the end of the six week study. Sexual desire was measured by both the Hurlburt Index of Sexual Desire (HISD) and the Female Sexual Functioning Index (FSFI) desire subscale. All other sexual functioning variables were measured by the FSFI. This chapter reviews and discusses the statistical findings of the
study as described in detail in Chapter Four. First, the results of the study are arranged by original hypotheses and summarized and discussed in reference to their relationships to previous literature. Next, theoretical and clinical implications of findings are discussed. Limitations of the study are then explored, and implications for future research are delineated.

**Summary of Results and Relationship to Previous Literature**

Although past research suggests that bibliotherapy is an effective treatment for sexual dysfunction (Gould & Clum, 1993, Marrs, 1995; van Lankveld, 1998), the current research represents the second of only two studies investigating bibliotherapy as a treatment for low sexual desire. A study conducted by Mintz and colleagues (2010) investigated the effectiveness of the popular press self-help book, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) at elevating participants’ scores on measures of sexual desire and other aspects of sexual functioning (sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning) as compared to a wait-list control group across the six week study and at a seven week follow-up. Due to the similarity between Mintz et al.’s (2010) study and the current study design and subject matter, and the fact that this is the only comparator study, the results of this study will be primarily compared to those reported by Mintz et al. (2010). Comparisons will be made in terms of the outcome variables: sexual desire, sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning.

**Hypothesis one.** The first hypothesis of this study relates to the comparison between those who received treatment (those in the MI and HI groups) and those who did not (the WLC group) on measures of outcome variables (sexual desire, sexual arousal,
sexual satisfaction, lubrication, orgasm, pain, and overall sexual functioning).
Specifically, it was hypothesized that participants in the MI and HI groups would make statistically significant gains across the six week study as compared to the WLC group on measures of sexual desire, sexual arousal, satisfaction, lubrication, orgasm, pain, and overall sexual functioning. Participants in both intervention groups (MI and HI) were combined to form one treatment group and were compared to the WLC group on outcome variables. This was done in order to test whether or not receiving some form of self-help treatment is superior to receiving no treatment. Next, participants in the MI group were compared to the WLC group on outcome variables, and participants in the HI group were compared to the WLC group on outcome variables. This was done in order to determine whether receiving a particular self-help book (A Tired Woman’s Guide to Passionate Sex or Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life) was superior to receiving no treatment. Results of these comparisons are reviewed and discussed below according to specific contrast (e.g. treatment versus no treatment, MI versus WLC, HI versus WLC). Findings are also compared to the scarce existing literature on bibliotherapy for low sexual desire in women (i.e., one study, Mintz et al., 2010).

**Combined Interventions versus WLC.** Results of primary analyses indicated that those who received some form of treatment demonstrated statistically greater gains across time on one of two measures of sexual desire (i.e., the HISD but not the FSFI Desire Subscale). They also made statistically significant gains in sexual satisfaction, lubrication, orgasm, and overall sexual functioning, as compared to the WLC group. Importantly, all effect sizes (Cohen’s $d$) were greater than 1.0, with the exception of
orgasm (0.67) and satisfaction (0.84), suggesting powerful effects of receiving treatment (i.e., reading a self-help book). With some exceptions, the above findings are consistent with those reported in the only other study conducted on bibliotherapy for low sexual desire in women that compared *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) to a wait-list control (Mintz et al., 2010). Both Mintz et al.’s (2010) study and the current study demonstrated that reading a self-help book for low sexual desire was effective at elevating participants’ scores on sexual desire, satisfaction, and overall sexual functioning, adding to the evidence supporting bibliotherapy as a treatment for sexual dysfunction (Gould & Clum, 1993; Marrs, 1995; van Lankveld, 1998). Nevertheless, a more direct comparison of this study’s results to those of Mintz et al. (2010) is found in the next set of analysis.

**MI versus WLC.** This study’s results revealed that participants who read *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) made statistically greater gains over time in sexual desire (as measured by the HISD but not the FSFI Desire Subscale), lubrication, orgasm, sexual satisfaction, and overall sexual functioning as compared to the WLC group. All effect sizes were above 1.0, with the exception of satisfaction, which was 0.54. Quite similarly, in Mintz et al.’s (2010) study, participants who read *A Tired Woman’s Guide to Passionate Sex* made statistically greater gains over time in sexual desire (as assessed by two measures of sexual desire: the HISD and the FSFI Desire Subscale), arousal, satisfaction, and overall sexual functioning as compared to the wait-list control group. In the Mintz et al, study, effect sizes were all above 1.0. To summarize, both studies found that participants who read Mintz’s self help book made gains in sexual desire, as measured by the HISD, and in sexual satisfaction and overall
sexual functioning. This study found gains in orgasm and lubrication not found in Mintz et al.’s (2010) study, whereas the Mintz et al. (2010) study found gains in arousal not found in this study, as well as gains on a second measure of sexual desire (FSFI) not found in this study.

The fact that the Mintz et al. (2009) study found gains in arousal and sexual desire, as measured by FSFI subscales, and this study did not may be explained by sample size. The current study contained 45 participants and three groups, while Mintz et al.’s (2010) study contained 45 participants and only two groups. The FSFI Arousal Subscale contains four items, and the FSFI Desire Subscale only contains two items. It is possible that the smaller number of items assessing desire and arousal on the FSFI resulted in reduced opportunity to observe between groups variability, especially given the small sample size. Perhaps a larger sample size would have revealed additional differences between groups as assessed by the FSFI Arousal and Desire Subscales.

Another difference observed between the current study and that conducted by Mintz et al. (2010) was found on measures of lubrication and orgasm. As noted earlier, participants who read *A Tired Woman’s Guide to Passionate Sex* made statistically greater gains over time in lubrication and orgasm as compared to the wait-list control group in the current study but not in Mintz et al.’s (2010) sample. As both groups of participants read the same book, it is unclear as to why they would each reap differential benefits. One explanation pertains to random differences between groups. It is possible that participants in Mintz et al.’s (2010) study were already functioning at a higher level in terms of lubrication and orgasm and therefore had less room for improvement. As one example, using lubricant during sexual encounters, as suggested by *A Tired Woman’s*
Guide to Passionate Sex, may do little for participants already engaging in this practice. It is possible that more women in the intervention group in the Mintz et al. (2010) study were already doing this, as compared to the women in the Mintz intervention group in this study. Indeed, when comparing the two studies, differences were observed between participants’ pre-test scores on the FSFI Lubrication and Orgasm Subscales. In Mintz et al.’s (2010) study, participants in the intervention group reported a mean lubrication score at pre-test of 4.31, while participants in the Mintz intervention group in the current study reported a mean lubrication score at pre-test of 2.72. Additionally, in Mintz et al.’s (2010) study, participants in the intervention group reported a mean orgasm score at pre-test of 4.15, while participants in the Mintz intervention group in the current study reported a mean orgasm score at pre-test of 2.68.

Importantly, the fact that one self-help book can produce varying results among different participants seeking help for the same problem may actually reflect the diversity of issues associated with low sexual desire and the myriad causes. Reading A Tired Woman’s Guide to Passionate Sex may provide differing benefit depending on the reader and her needs. Regardless of such observed differences, A Tired Woman’s Guide to Passionate Sex appears to have a significant impact on the overall sexual functioning and levels of sexual desire and sexual satisfaction of those who read it to address their desire concerns.

HI versus WLC. The current study’s results demonstrated that participants who read Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life (Hall, 2004) made statistically greater gains over time in sexual desire (as measured by the HISD but not the FSFI Desire Subscale), lubrication, and orgasm as compared to the
WLC group. All effect sizes were above 1.0, with the exception of lubrication, which was 0.59. No prior studies have investigated *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* as a treatment for low sexual desire in women, so these results cannot be compared to prior studies except to say that once again, it appears that bibliotherapy is an effective treatment for sexual concerns (Gould & Clum, 1993; Marrs, 1995; Mintz et al., 2010; van Lankveld, 1998).

**Hypothesis two.** The second hypothesis of this study involves the direct comparison between the two interventions studied, *A Tired Woman’s Guide to Passionate Sex* (the Mintz Intervention) and *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (the Hall Intervention). Specifically, it was hypothesized that participants in the Mintz Intervention group would either make statistically significant gains compared to the Hall Intervention group, or that these gains would not differ significantly from one another, but that the Hall Intervention group’s gains would not exceed those of the Mintz group gains.

As previously mentioned, both self-help books were written by feminist psychologists with extensive clinical experience treating women with low sexual desire. Additionally, both books contain psychoeducational information and individual and couple exercises. Topics covered in both books include: the author’s story, possible causes of low desire, communication skills, the importance of intimate touch, and specific suggestions for integration of new experiences into existing sexual repertoires. One difference, however, involves the layout of the interventions contained in the self-help books. Mintz’s (2009) book introduces a six-stepped treatment program at the beginning of the book, which is detailed in the remaining chapters. Hall (2004) offers
similar interventions but does not package these suggestions in the form of a treatment program that is readily described and identifiable to readers. Results of analyses comparing participants in the MI to participants in the HI are described and discussed below as they relate to existing literature.

**MI versus HI.** Results of study’s primary analyses revealed that participants in the MI group made statistically greater gains over time in sexual desire (as measured by the HISD but not the FSFI Desire Subscale), lubrication, and overall sexual functioning as compared to the HI group. Effect sizes ranged from 0.77 to 0.85. No differences were observed between the groups on any of the other measures. Differences observed in lubrication seem to reflect the relative frequency with which this issue is mentioned in the respective interventions; the importance of lubrication is mentioned several times throughout *A Tired Woman’s Guide to Passionate Sex* while it is only briefly mentioned in *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life.*

Regarding differences observed the MI and HI groups on measures of desire and overall functioning, the exact reasons behind these differences are unclear given the similarities between the interventions. It is possible that the presentation of each respective intervention impacted treatment adherence, participants’ confidence in the intervention, or participants’ hope for symptom improvement. Specifically, because Mintz’s (2009) intervention included a clearly delineated treatment plan, participants may have placed greater hope in this intervention, resulting in greater treatment outcomes. Future research may benefit from addressing issues such as motivation and beliefs about change.
Implications for Theory

The above findings are theoretically consistent with Annon’s (1974) PLISSIT model of treating sexual dysfunction and with Bower and Gilbody’s (2005) stepwise care model. Findings also further support bibliotherapy as a treatment for both sexual dysfunction generally (Gould & Clum, 1993; Marrs, 1995; van Lankveld, 1998) and low sexual desire (Mintz et al., 2010) in women specifically. As mentioned previously in both Chapters One and Two, the PLISSIT model details the stages of intervention for sexual dysfunction including Permission, Limited Information, Specific Suggestions, and Intensive Therapy. This model suggests that most individuals will be able to resolve their sexual concerns without therapy. Specifically, it posits that experiencing greater psychological freedom to explore their concerns (Permission) and receiving limited psychoeducation about their sexual problems (Limited Information) and advice on resolving concerns (Specific Suggestions) are sufficient for most individuals seeking help for sexual dysfunctions. Annon (1974) viewed Intensive Therapy as the final step in treatment, only to be pursued with the above three steps were ineffective. Similar to Annon’s (1974) model, Bower and Gilbody’s (2005) stepwise care model suggests that the least intensive form of treatment that can be presumed to be effective should be utilized first. Both of these models are supported by the current study’s findings in that receiving a self-help book for low sexual desire presumably provided participants with permission to explore their concerns, limited information about low sexual desire in women, and specific suggestions about resolving desire concerns. Beginning with the least costly and invasive form of treatment first (a take-home treatment that can be completed in the privacy of one’s home) is also consistent with the stepwise care model.
The current study is the second study to date providing efficacy for such a minimal intervention strategy, bibliotherapy for treatment of low sexual desire in women.

**Implications for Clinical Practice**

The current study suggests that bibliotherapy for low sexual desire is a promising treatment for women experiencing low sexual desire who are married, heterosexual, and who are generally happy with their marriages. Developing and testing treatments for low sexual desire that are safe, effective, low-cost, and widely accessible seems imperative, especially given the high prevalence rates and associated distress in some women (Laumann et al., 1995; Laumann et al., 1999; Rosen et al., 2009; Shifren et al., 2008; West et al., 2008). Specifically, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) appeared to be effective at increasing participants’ reported levels of sexual desire (as assessed by the HISD but not the FSFI Desire Subscale), overall sexual functioning, lubrication and orgasm functioning, and sexual satisfaction but not sexual arousal or pain across the six week study. *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004) appeared to be effective at increasing participants’ reported levels of sexual desire (as assessed by the HISD but not the FSFI Desire Subscale), lubrication and orgasm functioning but not overall sexual functioning, arousal, sexual satisfaction, or pain across the six week study. Participants in the Mintz Intervention also seemed to make statistically greater gains across time in sexual desire (as assessed by the HISD but not the FSFI Desire Subscale), overall sexual functioning, and lubrication as compared to the Hall Intervention group. Pending future research, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) appears to be a more effective intervention for women experiencing low sexual desire than *Reclaiming Your Sexual Self: How You Can*...
Bring Desire Back into Your Life (Hall, 2004). Such findings suggest that not all self-help treatments are equally effective, although self-help treatments such as books or videos are frequently suggested by professionals to their clients (Norcross, 2000).

As previously mentioned, although existing treatments for low sexual desire in women (Brotto et al., 2008; Hurlbert 1993; Trudel et al., 2001) have demonstrated some effectiveness in alleviating desire concerns, these treatments require training and resources on the part of the clinician and time, energy, and financial resources on the part of the client. The finding that *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) was effective at increasing participants’ reported levels of sexual desire (as assessed by the HISD but not the FSFI Desire Subscale), overall sexual functioning, lubrication and orgasm functioning, and sexual satisfaction are significant as this treatment is low-cost, widely available, and does not require the physical presence of a clinician. Particularly in the era of insurance battles regarding mental health treatment and the push for brief, empirically supported treatments, these findings provide great promise to assist large numbers of women with little cost or inconvenience and enhanced privacy. Pending future research investigating the long-term effectiveness of *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009), bibliotherapy seems to be a useful option as a treatment for desire concerns in women.

As outlined in Chapter Two, the American Psychological Association’s Task Force on Promotion and Dissemination of Psychological Procedures (1998) developed a set of criteria designating treatments as either well established or probably efficacious. As a reminder, Well-established treatments as those which fulfill the following criteria (APA, 1998): 1) At least two good between group design experiments demonstrating
efficacy; or 2) A large series of single case design experiments (n >9) demonstrating efficacy. Regarding the former, efficacy must be demonstrated in one or more of the following ways: 1) superior (statistically significantly so) to a pill or psychological placebo or to another treatment; 2) equivalent to an already established treatment in experiments with adequate sample sizes. Experiments must also be conducted with treatment manuals, and sample characteristics must be clearly described. Experimental effects must also have been demonstrated by a minimum of two different investigators or research teams. *Probably efficacious treatments* as those which fulfill the following criteria (APA, 1998): 1) Two experiments showing the treatment is superior (statistically significantly so) to a waiting-list control group; or 2) one or more experiments meeting the criteria of that for well-established treatments, with the exception that the effects do not have had to have been demonstrated by at least two different investigators or investigating teams, or 3) a small series of single case design experiments (n >3) otherwise meeting the criteria for well-established treatments.

The results of the current study coupled with those reported by Mintz et al (2010) suggest that *A Tired Woman's Guide to Passionate Sex* (Mintz, 2009) is the first *probably efficacious* treatment for low sexual desire in women, including bibliotherapy and face-to-face interventions. Two experiments have now demonstrated that this intervention is superior to a wait-list control group, and one experiment has demonstrated that it is superior to another treatment. In order to be categorized as a *well established* treatment, future research must compare *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) to another treatment or to a psychological placebo. Additionally, research must be conducted by a different investigator and/or research team.
One potentially important caveat to this consideration of *A Tired Woman’s Guide to Passionate Sex* as a potentially efficacious treatment concerns the issues regarding diagnoses discussed earlier. To reiterate, HSDD refers to the *DSM*-defined diagnosis for low sexual desire and includes specific clinician-defined criteria, while LSD refers to concerns with diminished sexual desire more generally and involves participant-defined concerns. When using cutoff scores on the FSFI, women in the MI would be diagnosed as having a *DSM*-defined sexual dysfunction at both pre- and post-test according the criteria established by Weigel and colleagues (2005), even though their scores at post-test had improved significantly from pre-test and were extremely close to the cutoff for not having a diagnosis. This study was concerned with participant-defined, rather than clinician-defined, concerns (Brotto, 2010), and so for the purposes of this study, the lack of reaching the cut-off may be less of a concern than a study focused on the treatment of *DSM*-defined diagnosable disorders. However, in such a study, good practice would dictate that diagnoses be made not by an instrument but by a clinical interview. Future studies could examine the efficacy of bibliotherapy in general, and *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) in specific, using both clinical interviews pre and post-test and inventories. Of course, the hazard of such an approach is the compromise to external validity as individuals using self-help in the real world do not speak to a clinician beforehand, and even participating in such a diagnostic interview may influence results.

**Limitations**

The current study is limited by its sole reliance on self-report measures for assessing changes in dependent variables. Generally, including multiple methods of
assessing dependent variables is ideal. Examples of additional means of assessing dependent variables in sex research typically include clinician interviews, third party reports, and physiological measures, among other methods. These assessment tools often necessitate direct contact between researchers and participants which then decreases the external validity of the results. In addition, such methods require a great deal of financial and physical resources. Due to the amount of resources required on the part of researchers and participants in order to implement such methods, the current study relied on self-report. In part to address this issue, two separate measures of sexual desire were included in this study.

A second limitation involves this study’s use of a narrowly defined population. Specifically, enrollment criteria required that participants be female, married, heterosexual, between the ages of 28 and 58, experiencing low sexual desire that is distressing to them yet generally happy in their romantic relationships. These criteria were used because this is the population that the two self-help books are marketed to, thereby making this a good test of the effectiveness of the books for such a population but not for those women who may buy the book but be experiencing more distress in their romantic relationships. Also, as this study was conducted in the Midwest, the sample was heavily representative of European American women who identify as Christian (91% and 71.1% of the sample, respectively). Future research must be conducted with other groups of women (i.e., other geographic regions, other ethnicities) to further examine their effectiveness.

Another limitation stems from the recruitment of participants. Specifically, the women who responded to the recruitment advertisements with the taglines “Seeking
Women with Diminished Sexual Desire for Intervention Study” and “Lacking Libido? Reclaim your Sexual Desire” may be different in some way from women in the general population suffering from this issue. For example, participants may have been more motivated to make changes given their willingness to endure the discomfort of contacting researchers in regards to a sexual problem. Indeed, 55.6% of participants indicated that they were “motivated” to increase their sexual desire at pre-test, and 22.2% indicated that they were “very motivated” to increase their desire at pre-test. Additionally, individuals who responded to the advertisement may have placed more hope in the intervention given its association with a research study. In any case, it appears as if participants deemed it important to increase their sexual desire (82.2% indicated at pre-test that it was “important” or “very important” that they increase their desire). This may not be representative of all women experiencing low sexual desire, with some research finding that not all women are distressed by their diminished sex drive (Rosen et al., 2009). It is possible that the specific sample studied represents a unique group of women who are experiencing low sexual desire, who are distressed by their desire, and who are motivated to increase their desire.

An added limitation involves the observed differences between participants who completed the post-test and those who did not on the FSFI Orgasm Subscale. Those who did not complete the post-test appeared to have lower orgasm functioning at pre-test than those who did complete the post-test. Therefore, perhaps some individuals who dropped out of the study may have done so because they were not benefiting from books on low sexual desire and instead, would have benefited from a book for women with difficulty reaching orgasm. Nevertheless, it is important to note those who completed the post-test...
did not significantly differ from those who did not complete the post-test on any of the other dependent variables or demographic variables at pre-test.

Finally, this study is limited by its small sample size \( (N = 45 \text{ distributed among 3 groups}) \), and indeed research in the area of sexual dysfunction has been criticized for this very issue (van Lankveld, 2009). Individuals are often reticent to openly discuss and/or admit sexual problems, especially to researchers, as doing so may result in embarrassment or anxiety. Recruitment of more participants may have been more challenging given this issue, particularly in the Midwest where sexual mores tend to involve more privacy, discretion, and conservative values. Despite the current study’s small sample, the power was determined to be adequate (it was projected that including 45 participants would result in a power of 0.83).

**Directions for Future Research**

In order to better understand the impact of bibliotherapy on low sexual desire in women, future studies would likely benefit from utilizing increased sample sizes, including placebo control groups, and comparing interventions to additional treatment modalities, recommendations which are consistent with van Lankveld’s (2009) suggestions for improvements in research design and the American Psychological Association’s criteria for empirically supported treatments (APA, 1998). One way to achieve the latter two methodological improvements (e.g. comparison to placebos and other treatment modalities) could be accomplished by comparing the book to a proven medical intervention and a medical placebo. Given the current trend of medicalizing sexual dysfunction (Heiman, 2008) and the controversy surrounding this (New View Campaign, 2011), such a study would be quite useful. If a psychological intervention
were found to be as or more effective than the medical intervention at elevating desire, such a psychological intervention would provide women with relief without the potentially hazardous side effects of many medical interventions (Anderson et al., 2004; Davis et al., 2008; Tamimi et al., 2006). As an example, one future research design could compare *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) to the medical supplement ArginMax, as well as to a placebo pill. ArginMax is a nutritional supplement that has been shown to improve sexual desire in women (Ito, Polan, Whipple, & Trant, 2006; Polan & Trant, 2001). In addition to possibly garnering more empirical support for psychological interventions, this study would also compare the effectiveness of a psychological intervention to a medical placebo, which is consistent with the required steps for deeming an intervention *well established* according to the American Psychological Association (1998). Assessing the long term effectiveness of both the psychological and medical interventions seems important, as some have observed that engaging in purely medical interventions for sexual dysfunctions actually results in poorer outcomes because underlying psychological causes are initially ignored and later resurface (Rosen, 2007).

Along with this, another future direction could involve comparing the bibliotherapy intervention, *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009), to another psychological intervention for desire concerns such as Brotto et al.’s (2008) three session group treatment for sexual arousal and/or sexual desire disorders in women. As a reminder, this group was implemented using a manualized treatment that integrated elements of psychoeducation, cognitive-behavioral therapy, sex therapy, relationship therapy, and mindfulness. By the end of treatment, participants in Brotto et al.’s (2008)
study reported experiencing improvements in sexual desire and reductions in sexual distress. Comparing a bibliotherapy intervention to a face-to-face therapeutic intervention such as Brotto et al.’s (2008) group treatment offers the opportunity to garner additional support for bibliotherapy for sexual dysfunctions generally and for low sexual desire specifically. Doing so may also provide evidence that A Tired Woman’s Guide to Passionate Sex (Mintz, 2009), a minimal intervention strategy, is as or more effective than a face-to-face therapeutic intervention. Because face-to-face therapeutic interventions are often costly and require the presence of a trained clinician, providing additional support for a self-help strategy for low sexual desire in women would seem to be a powerful step in widening access to safe, effective, and financially viable treatments for women reporting low sexual desire.

Additional factors which should be explored in future studies include whether or not participants liked or enjoyed reading their particular book, how stressed participants were, how motivated participants were to engage in treatment, and how participants’ partners responded to their attempts to alleviate their desire concerns. The current study did not assess whether or not participants liked or enjoyed their particular book. It is possible that some participants simply disliked the writing style or examples provided, decreasing their engagement with the material. Future research on bibliotherapy as a treatment for low sexual desire more broadly and sexual dysfunction more specifically would likely benefit from including questions about the likeability and readability of the interventions tested. Furthermore, Ellison, (2006) found that participants in her study cited being stressed or fatigued as primary reasons for lack of desire. Stress may therefore be an important variable to include in studies examining interventions for low sexual
desire in women. It should be noted, however, that a large sample size is most often necessary when examining treatment interactions and conducting moderation analyses (e.g. if stress or motivation predict treatment outcomes). Participants’ stress and motivation levels were assessed in the current study, yet the sample size \( N = 45 \) was not large enough to garner the power necessary to accurately interpret moderation and interaction analyses. Finally, in regard to relationship factors, some researchers (Hurlbert, 1993) have hypothesized that relationship rather than individual factors are a primary determinant of the development and outcome of desire concerns. Although it is ideal to assess participants’ partners’ receptivity to engage in exercises contained in the books and to support their partners’ attempts to improve their desire, doing so is not always financially or logistically possible.

Another issue of relevance to the improvement of research design involves the inclusion of follow-up assessments regarding the long-term effectiveness of bibliotherapy for low sexual desire in women. A prior study (Mintz et al., 2010) that compared *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) to a wait-list control group included a seven week follow-up assessment. Results suggested that gains in sexual desire and overall sexual functioning in the intervention group were maintained at follow-up. Future research should include such follow-up assessments and may benefit from gathering longitudinal data. Indeed, data is currently being collected assessing for the long term effectiveness of both *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) and *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004). Gaining information about the long-term effectiveness of bibliotherapy
interventions for low sexual desire in women could be very useful when determining their clinical relevance and usefulness.

**Summary and Conclusions**

The current study was the second study to date that investigated bibliotherapy as a treatment for low sexual desire in women and added to the evidence supporting bibliotherapy as an effective intervention for sexual dysfunction (Gould & Clum, 1993; Marrs, 1995; Mintz et al., 2010; van Lankveld, 1998). Specifically, participants who received some form of treatment (the Mintz or Hall Interventions) demonstrated statistically greater gains across time on measures of sexual desire (the HISD but not the FSFI Desire Subscale), satisfaction, lubrication, orgasm, and sexual functioning, as compared to the WLC group. Participants who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004) made statistically greater gains over time in sexual desire (the HISD but not the FSFI Desire Subscale), lubrication, and orgasm as compared to the WLC group. Participants who read *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) demonstrated significantly greater gains in sexual desire (the HISD but not the FSFI Desire Subscale), lubrication, orgasm, satisfaction, and overall sexual functioning across time as compared to the control group and exhibited significantly greater gains in sexual desire (the HISD but not the FSFI Desire Subscale), lubrication, and overall sexual functioning across time as compared to participants who read *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004). Combined with past research which demonstrated that *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) is an effective intervention for women with low sexual desire, the current research establishes *A Tired Woman’s Guide to Passionate Sex* (Mintz,
as the first *probably efficacious* treatment for low sexual desire in women, according to criteria on empirically supported treatments developed by the American Psychological Association.

Bibliotherapy for sexual dysfunction is theoretically consistent with the PLISSIT model for treating sexual dysfunction (Annon, 1974) and Bower and Gilbody’s (2005) stepwise care model. Although a significant proportion (85%) of clinical and counseling psychologists recommend self-help books (Norcross et al, 2000), many treatments have not been empirically tested or supported. Indeed, Rosen (2004) asserts that recommending self-help treatments that have not been empirically tested may actually result in harm being done to consumers (Rosen, 2004). The current research supports the notion that not all self-help is created equal. *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) appeared to provide participants with greater benefit than the second self-help book studied, *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* (Hall, 2004).

Strengths of this study include its randomized controlled trial design, its inclusion of two rather than one intervention groups, and its real world applicability. This study empirically investigated treatments for low sexual desire which are cost effective, widely available, and easily implemented in the privacy of one’s home. This study is limited by its small sample size, lack of longitudinal data, and narrowly defined population. Given the combined strengths and weakness of the current research, it is hoped that future research continues to investigate minimal intervention strategies including bibliotherapy as treatments for low sexual desire in women. Such research provides the potential to
discover treatments such as *A Tired Woman’s Guide to Passionate Sex* (Mintz, 2009) which may revolutionize how low sexual desire is viewed and treated.


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Appendix A

Demographic Questionnaire

1. Question asking participants to create a unique identifier

___________________________________

2. Age _____________________________

3. Race/Ethnicity

   Black/African American
   White/European American
   Biracial/Multiracial
   Latino(a)/Hispanic
   Asian/Pacific Islander
   Native American
   Middle Eastern
   Other

4. If you indicated "other" in the question above, please indicate with which racial or ethnic group you identify.

___________________________________

5. Education Level

   High School Degree/GED
   Some College
   Associate's Degree
   Bachelor's Degree
   Some Graduate/Professional training
   Master's Degree
   Doctoral Degree
Advanced Professional Degree

Other

6. If you indicated "other" in the question above, please indicate your education level.

______________________________________________________________________

7. Sexual Orientation

Heterosexual

Bisexual

Lesbian

Gay

Questioning

Other

8. If you indicated "other" in the question above, please indicate your sexual orientation.

______________________________________________________________________

9. Marital Status

Married

Single

Committed

Divorced

Widowed

10. If you are married or in a committed relationship, how long have you been in the relationship?

______________________________________________________________________

11. Are you currently employed?

Yes

No
12. If employed, do you work part-time or full-time?
   Part-time
   Full-time

13. If you are in a married/committed relationship, is your spouse/partner currently employed?
   Yes
   No

14. If your spouse/partner is employed, does he work part-time or full-time?
   Part-time
   Full-time

15. What is your approximate yearly household income?
   Less than $15,000
   $15,000-$25,000
   $25,000-$50,000
   $50,000-$75,000
   $75,000-$100,000
   $100,000 and above

16. What is your religion?
   Judaism
   Christianity
   Muslim
   Buddhist
   Hindu
   Chinese Folk
   Tribal Religions
New Religions
Non-religious
Atheist
Agnostic
Other
17. If you indicated "other" in the question above, please indicate your religion.

18. Do you have a child/children who live with you?
   Yes
   No
19. Please List the Ages and Sex of Your Children Below
   M/F, Age:
   M/F, Age:
   M/F, Age:
   M/F, Age:
20. How stressed do you feel on a daily basis?
   Minimally Stressed
   Somewhat Stressed
   Quite Stressed
   Extremely Stressed
**Appendix B**

**Motivational Questionnaire**

1. How important is it to you to increase your sexual desire?

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2. How confident are you in your ability to increase your sexual desire?

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3. How motivated are you to work on increasing your sexual desire?

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<th>SOMEWHAT MOTIVATED</th>
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Appendix C

Guided Inquiry, Adapted
(adapted from Heppner et al.’s (1992) questionnaire, the Guided Inquiry).

1. Have you finished reading the book? If not, what page are you on?

2. What is the most helpful thing that you read in the book?

3. What in this book helped you to increase your sexual desire, sexual arousal, or other aspects of sexual functioning (e.g. sexual satisfaction, orgasm, lubrication, pain)?

4. What in this book kept you from increasing your sex drive or satisfaction?

5. Did you find yourself thinking about topics from the book when you were not reading it? If so, what kinds of things did you think about?

6. Are you deriving any benefits from reading this book that you did not expect? If so, what are those benefits?

7. Are you experiencing any problems as a result of reading the book? If so, what are those problems, and how are you addressing them?

8. Have you done anything else besides read this book to address your low sex drive (e.g., seek counseling, talk to friends, read another book) since the time you started reading this book? If so, what have you done and has it helped? If so, how?
Appendix D

Recruitment Advertisement (submitted to MU Info)

Submission Subject:
Seeking Women with Diminished Sexual Desire for Intervention Study

Submission Body:
Seeking heterosexual married women who are between the ages of 28 and 58 who feel satisfied with their marriages but who are bothered by a diminished, low sex drive. The study involves reading a free copy of one of two self-help books. Both books contain information and resources relevant to low sexual desire in women. Study participants will also be asked to fill out questionnaires on sexual desire, and other aspects of sexual functioning, which may be rather personal. The study is completely confidential. To enroll, call or email Alexandra Balzer at amb062@mizzou.edu or at 573-356-5960.
Appendix E

**Recruitment Script (used when participants asked for more information via telephone or email).**

**Phone**

I am involved in a study in which we will be giving one of two books on low sexual desire to women and examining their effectiveness. You will not be informed of the name of the book that you will be given until you receive it in the mail. Both books are written by psychologists and focus on helping women with low sexual desire get their sex drive back and put passion back into their relationships. For this study, we are recruiting women who are heterosexual, married, between the ages of 28 and 58, and generally happy with their marriages. The study involves women taking some questionnaires before and after they read one of the books over a period of about 6 weeks and at a 6 week follow-up. These questionnaires will involve questions about reactions to the books and about sexual desire and other aspects of sexual functioning, and may be rather personal. Are you interested in participating? If so, I can put you on the enrollment list and send you additional information by email.

If they say yes: provide the following contact information for Alexandra Balzer and collect their name and email address.

**Email**

I am involved in a study in which we will be giving one of two books on low sexual desire to women and examining their effectiveness. You will not be informed of the name of the book that you will be given until you receive it in the mail. Both books are written by psychologists and focus on helping women with low sexual desire get their sex drive back and put passion back into their relationships. For this study, we are recruiting women who are heterosexual, married, between the ages of 28 and 58, and generally happy with their marriages. The study involves women taking some questionnaires before and after they read one of the books over a period of about 6 weeks and at a 6 week follow-up. These questionnaires will involve questions about reactions to the books and about sexual desire and other aspects of sexual functioning, and may be rather personal. If you are interested in participating or have further questions, please respond to this email (amb062@mail.missouri.edu) or call 573-356-5960.
Appendix F

Enrollment Email

Thank you for your interest in participating in the study. Again, to be eligible for the study you must be a married, heterosexual female between the ages of 28 and 58 who is experiencing low sexual desire but is generally happy with her marriage.

Sometime within the next two weeks (after we have recruited all participants) we will be sending you information to begin your participation in this study. We will be sending this information over email. Unless you instruct us otherwise, this is the email address that we will send the study information to.

If you have any questions, please don’t hesitate to reply to this email or to call me at 573-356-5960.

Also, if you know other women who might be interested in participating, please have them contact Alexandra Balzer at amb062@mizzou.edu or at 573-356-5960.

We look forward to having you in the study!
Appendix G

Email with First Set of Surveys

Thank you for your patience in waiting to be contacted regarding our intervention study for women experiencing low sexual desire. We are very glad to have you participating in our study, which we are now ready to begin.

To begin your participation, please click on the link below. This link will direct you to the informed consent for this study. Should you agree to participate after reading the informed consent, you will find a set of questionnaires at this link.

We ask that you complete all questionnaires within 5 days of receiving this email. In five days, we move to the next phase of the study, which for two thirds of the participants includes receiving and reading a book on low sexual desire and for a third, includes receiving a letter letting you know you will receive the book in six weeks.

Please don’t hesitate to contact me if you have questions. Thanks!

LINK
Appendix H

Informed Consent

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Self-Help Books for Low Sexual Desire

You are invited to participate in a research study examining your reactions to reading a self-help book for low sexual desire. Before you agree to take part, please read this carefully and make sure you understand what is involved in participating in the study.

Nature and Purpose of Study

The main purpose of this study is to examine the efficacy of one of two self-help books for increasing sexual desire, sexual arousal, and other aspects of sexual functioning (e.g., satisfaction, orgasm, lubrication) among married heterosexual women who report low sex drive.

Previous studies have indicated that between 20 and 52 percent of women experience symptoms of low sexual desire at some point in their lives. Many women do not seek help for their concerns, although they are distressed by their low sexual desire. This study seeks to examine the effectiveness of a self-help intervention for low sexual desire using two books that contain information and suggestions for regaining your libido.

You are being asked to take part in this study because you have indicated interest in doing so previously.

Participant Responsibilities

First, you will be asked to create a unique identifier for use in this study. You will then fill out several questionnaires on your demographic characteristics and your sexual drive, sexual arousal, and other aspects of sexual functioning. You will then provide your mailing address and email address, as well as the unique identifier you created earlier. Next, you will receive a copy of one of the self-help books in the mail or a letter indicating you will receive a book in six weeks. (Which group you are in will be chosen randomly). You will not be informed of the name of the book until you receive it in the mail.

If you are in the group that receives a book immediately you will be asked to read it in a six week period of time. While reading your book, we ask that you please complete any exercises suggested in the book. After receiving your book in the mail, you will also receive the following additional communications from us:
1. Three weeks after we mail you a book, we will send you a reminder email notifying you that you will be completing a second set of measures in an additional three weeks, at which time you should be finished reading your book.

2. Six weeks after we mail you the book, we will send you an email with a link to questions about your reactions to your book and to questionnaires regarding your sexual drive, sexual arousal, and other aspects of sexual functioning. We will also ask you a few repeat demographic questions.

3. Six weeks after you have completed your book and have responded to the second set of questionnaires, you will again receive an email with a link to questions regarding your sexual drive, sexual arousal, and other aspects of sexual functioning. This is to examine the long-term effectiveness of the self-help strategy that you have received. You will also be asked to complete a few repeat demographic questions.

If you are in the group that receives a book in six weeks, in addition to the letter informing you that you are in this group, you will receive three additional communications from us:

1. Three weeks after we inform you by letter that you are in the group that will receive the book in six weeks, we will send you an email reminding you that a book will be coming in an additional three weeks.

2. Three weeks later, we will send you an email with a link to questions regarding your sexual drive, sexual arousal, and other aspects of sexual functioning. We will also ask you a few repeat demographic questions, as well as anything else you have done to address your sex drive while waiting for the book.

3. After filling out this questionnaire, we will then mail you a copy of one of two self-help books for low sexual desire in women.

Participants in both groups will be asked to complete any surveys sent within five days. If you do not, we will send you up to three email reminders (each five days apart) requesting that you please complete the surveys.

Expected Benefits

By taking part in the study, you will be helping to test the effectiveness of two self-help books for low sexual desire, a very common problem among women. Little research has been done in this area, and you would be helping to contribute to the search for effective interventions.

Based on past research on self-help for low sexual desire in women, it is also possible that your own sexual drive and/or functioning will increase as a result of reading a book and participating in this study.
Another benefit is that you will receive a free copy of one of two books for low sexual desire. The book that you receive is yours to keep.

Possible Risks

The overall expected risk is minimal. You may be uncomfortable answering questions about sexual drive, satisfaction and functioning or about your reactions to the book. As a result of reading this book, you also face two additional possible risks. One of these risks is that through reading this book you may become aware that your problem with low sexual desire is due to more serious concerns (e.g., due to problems in your marriage, past negative sexual experiences, etc.). Another risk is that when you attempt any homework exercises suggested by the books that require you to talk to your spouse or do exercises with your spouse, he will react negatively and/or be uncooperative, potentially causing you to feel upset or dissatisfied. In both of these cases, you may choose to stop reading and seek additional help. Additional information on how to seek such help is located in the section below. If you experience any problems as a direct result of being in the study or have questions about research participants’ rights, please contact the MU Campus Institutional Review Board at (573) 882-9585.

Right to Refuse or Withdraw

Participation is purely voluntary. If you are an MU employee or student, participation in this research is in no way connected to academic or personnel requirements. You have the right to refuse to take part in this study or to withdraw from the study (i.e., stop reading the book; stop responding to the email surveys) at any time. If you withdraw because of one of the risks outlined above and want to seek counseling, the following are resources depending on your student/employment status and health insurance situation. If you are a University of Missouri student, you can seek services and referrals from the MU Counseling Center (882-6601). If you are a University of Missouri employee, you can seek services and referrals from the University Employee Assistance Program (882-6601). Some University Employee and Student Health Insurance also include mental health coverage, and you can contact your plan administrator for details and referrals (contact numbers are generally located on health insurance cards). If you are not a University of Missouri employee and have health insurance which includes mental health coverage, you may also receive a referral directly from your health insurance company (again, contact numbers for referrals are generally located on health insurance cards). If you are not a University of Missouri employee and do not have health insurance, sliding fee services can be obtained at the Family Counseling Center in Columbia (449-2581) or the Psychological Services Clinic (882-4677). Finally, any participant who desires to seek counseling is also welcome to contact Dr. Glenn Good (GoodG@missouri.edu, 882-2961) for a confidential referral to counseling.

Confidentiality

We will be asking you to create a unique identifier for this study. We will also be asking you for contact information (email and mailing address) to mail you the book and email
you the surveys. A list linking your contact information with your unique identifier will be kept in a locked filing cabinet, accessible only to authorized research personnel. The list linking your unique identifier with your contact information will be used only to contact you with reminder emails if you do not reply to the surveys. The actual data you provide via completing the online surveys will not be associated with your identity in any way. Your responses will be used for research purposes only. Study findings will be based on aggregate group data only. You will not be identifiable in any publication or presentation, which may arise from this research. The researchers will never reveal the identity of anyone who participated in this study. At the close of the study, your contact information and its association to your unique identifier will be destroyed.

By entering the study site below, you are indicating that you have read the above information and that you agree to take part in the study as described. If you would like to receive a copy of this consent form, please contact Alexandra Balzer at amb062@mail.missouri.edu.
Appendix I

Page in Survey Collecting Addresses

Thank you for consenting to be part of this study. As explained in the consent, we will now mail two thirds of you a book and the other third a letter letting you know that the book will be mailed to you in six weeks. We will also be sending you follow up information and questionnaires. We thus need your mailing address and the email address to which you want us to send study information and questions to.

We are also asking you to generate your unique ID Code again. We will keep a list linking your contact information with your unique identifier in a locked filing cabinet, accessible only to authorized research personnel. This list will be used only to contact you with reminder emails if you do not reply to the surveys. The actual data you provide via completing the online surveys will not be associated with your identity in any way. Likewise, that you participated in this study will never be revealed by the researchers to anyone.

Name:

Email:

Mailing Address:

Unique Identifier: Please provide your unique identifier below by responding to the following questions:
First Two Letters of Your Last Name: ____
First Two Letters of Your Husband’s First Name: ____
The Month of the Anniversary of Your Marriage: ____

For example, Sue Smith is married to Ryan Jones and got married in June. Her unique identifier would be SMRYJUNE.
Appendix J

Reminder Email for those who have not completed their surveys

Thank you again for your interest in our intervention study for women experiencing low sexual desire. We are writing because about five days ago we sent you an email with a link to a survey concerned with the study we are conducting.

We asked for you to complete this survey within five days, and we still have not heard from you. We ask that you please reply to the survey as soon as possible but no later than in five more days.

If you have any questions, please contact Alexandra Balzer at amb062@mizzou.edu or at 573-356-5960.
Appendix K

Letter sent to Wait-list Group

Thank you for your interest in participating in our study on interventions for women with low sexual desire.

You are one of the participants randomly chosen to receive a book in six weeks. Specifically, as per the informed consent, in six weeks we will send you another link to a set of surveys; after completing these surveys, we will mail you a copy of one of two self-help books, *A Tired Woman’s Guide to Passionate Sex* or *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*.

We thank you in advance for your patience.

We will be in touch, via email, again in three weeks to remind you that the book will be arriving in an additional three weeks.

In the meantime, if you have any questions or concerns, feel free to contact the researchers, whose contact information is provided below.

Thank you for your participation!

Alexandra Balzer  
Amb062@mail.missouri.edu  
573-356-5960

Laurie Mintz  
MintzL@missouri.edu  
573-882-4947
Appendix L

Letter to Accompany *A Tired Woman’s Guide to Passionate Sex*

Thank you for your interest in participating in our study on interventions for women with low sexual desire. You are receiving a copy of the self-help book, *A Tired Woman’s Guide to Passionate Sex*.

Please read this book within six weeks of receiving it, so by __________.

We strongly encourage you to not only read the book but to complete the suggested exercises in the book.

To remind you of what participation entails, along with reading the book, we will contact you via email in three weeks to check-in regarding your progress in reading *A Tired Woman’s Guide to Passionate Sex*. In six weeks, we will contact you again and ask you to fill out some questionnaires regarding your sexual drive and other aspects of sexual functioning, as well as some questions about your reactions to the book. If you don’t reply to these emails, we will send you up to two reminder emails.

If you have any questions or concerns, feel free to contact the researchers, whose contact information is provided below.

Thank you for your participation!

Alexandra Balzer
Amb062@mail.missouri.edu
573-356-5960

Laurie Mintz
MintzL@missouri.edu
573-882-4947
Appendix M

Letter to Accompany Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life

Thank you for your interest in participating in our study on interventions for women with low sexual desire. You are receiving a copy of the self-help book, Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life.

Please read this book within six weeks of receiving it, so by __________.

We strongly encourage you to not only read the book but to complete the suggested exercises in the book.

To remind you of what participation entails, along with reading the book, we will contact you via email in three weeks to check-in regarding your progress in reading Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life. In six weeks, we will contact you again and ask you to fill out some questionnaires regarding your sexual drive and other aspects of sexual functioning, as well as some questions about your reactions to the book. If you don’t reply to these emails, we will send you up to two reminder emails.

If you have any questions or concerns, feel free to contact the researchers, whose contact information is provided below.

Thank you for your participation!

Alexandra Balzer
Amb062@mail.missouri.edu
573-356-5960

Laurie Mintz
MintzL@missouri.edu
573-882-4947
Appendix N

Email to Wait-List that they will be receiving the Book in 3 weeks

Thank you for your patience in waiting to receive one of the self-help books for women with low sexual desire, *A Tired Woman's Guide to Passionate Sex*, or *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*. We thank you for your interest in participating in our study on self-help for women with low sexual desire and hope you are still interested in doing so!

This email is just to remind you that in three weeks, you will be sent an email with another survey link and upon completing the survey, you will be mailed one of the two books.

If you have any questions or concerns, feel free to contact the researchers, whose contact information is provided below.

Thank you for your participation!
Appendix O

Email to MI Group that study will end in 3 weeks

Hello! You should now be about halfway through reading *A Tired Woman’s Guide to Passionate Sex*. In about three weeks, you will receive a link for a set of online surveys related to your experiences reading the book. You will also be asked questions in regard to your sexual desire and other aspects of sexual functioning. Thank you again for your participation!
Appendix P

Email to HI Group that study will end in 3 weeks

Hello! You should now be about halfway through reading *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*. In about three weeks, you will receive a link for a set of online surveys related to your experiences reading the book. You will also be asked questions in regard to your sexual desire and other aspects of sexual functioning. Thank you again for your participation!
Appendix Q

Email for MI Group at end of study

Hello! You should now be done (or almost done) reading *A Tired Woman’s Guide to Passionate Sex*. Please click on the link below and answer the following questions pertaining to the book and to your sexual desire and other aspects of sexual functioning. We ask that you please complete this questionnaire within five days.

LINK
Appendix R

Email for HI Group at end of study

Hello! You should now be done (or almost done) reading *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life*. Please click on the link below and answer the following questions pertaining to the book and to your sexual desire and other aspects of sexual functioning. We ask that you please complete this questionnaire within five days.

LINK
Appendix S

Debriefing for MI and HI Intervention Groups at Close of Study

Thank you for participating in this study. We hope you have enjoyed reading the book and filling out the questionnaires, and that you have derived benefit from the book.

As you are aware, the purpose of this study was to examine the effectiveness of two self-help books *A Tired Woman’s Guide to Passionate Sex* and *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* for enhancing sexual desire and other aspects of sexual functioning among women experiencing diminished sexual desire.

At the end of this study, it is possible that you have finished reading the book that you received without improvement in your sex drive. Or, perhaps you have read the book and it has led you to discover that problems more serious are fueling your low sex drive. You may want to seek counseling for such problems. As mentioned in the consent form, the following are resources depending on your student/employment status and health insurance situation. If you are a University of Missouri student, you can seek services and referrals from the MU Counseling Center (882-6601). If you are a University of Missouri employee, you can seek services and referrals from the University Employee Assistance Program (882-6601). Some University Employee and Student Health Insurance also include mental health coverage, and you can contact your plan administrator for details and referrals (contact numbers are generally located on health insurance cards). If you are not a University of Missouri employee and have health insurance which includes mental health coverage, you may also receive a referral directly from your health insurance company (again, contact numbers for referrals are generally located on health insurance cards). If you are not a University of Missouri employee and do not have health insurance, sliding fee services can be obtained at the Family Counseling Center in Columbia (449-2581) or the Psychological Services Clinic (882-4677). Finally, any participant who desires to seek counseling is also welcome to contact Dr. Mintz (MintzL@missouri.edu, 882-4947) for a confidential referral to counseling.

Again, thank you for your participation!
Appendix T

Debriefing for Wait-list Group at Close of Study

Thank you for participating in this study.

As you are aware, the purpose of this study was to examine the effectiveness of two self-help books *A Tired Woman’s Guide to Passionate Sex* and *Reclaiming Your Sexual Self: How You Can Bring Desire Back into Your Life* for enhancing sexual desire, and other aspects of sexual functioning among women experiencing diminished sexual desire. As you know, you were in the group that was asked to wait six weeks to receive a book. That is because to examine the effectiveness of these books, we needed to compare women who read the books to women who did not. Again, we thank you for your patience.

As the study has been completed, this will be our last contact with you. Thus, while we hope this does not happen, it is possible that you will finish reading the book we will soon send you without improvement in your sex drive. Similarly, it is possible that reading the book will lead you to discover that more serious problems are fueling your low sex drive. If this occurs, you may want to seek counseling for such problems. If you are a University of Missouri student, you can seek services and referrals from the MU Counseling Center (882-6601). If you are a University of Missouri employee, you can seek services and referrals from the University Employee Assistance Program (882-6601). Some University Employee and Student Health Insurance also include mental health coverage, and you can contact your plan administrator for details and referrals (contact numbers are generally located on health insurance cards). If you are not a University of Missouri employee and have health insurance which includes mental health coverage, you may also receive a referral directly from your health insurance company (again, contact numbers for referrals are generally located on health insurance cards). If you are not a University of Missouri employee and do not have health insurance, sliding fee services can be obtained at the Family Counseling Center in Columbia (449-2581) or Psychological Services Clinic (882-4677). Finally, any participant who desires to seek counseling is also welcome to contact Dr. Mintz (MintzL@missouri.edu, 882-4947) for a confidential referral to counseling.

Again, thank you for your participation!
Appendix U

Letter sent to those in WLC Group to accompany book

First, again thank you for your patience in waiting to receive this book! We appreciate it!

Thank you also again participating in our study on interventions for women with low sexual desire.

If you have any questions or concerns, feel free to contact the researchers, whose contact information is provided below.

Alexandra Balzer  Laurie Mintz
Amb062@mail.missouri.edu  MintzL@missouri.edu
573-356-5960  573-882-4947
Table 1. Sample Demographics ($N = 45$)

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<tr>
<td>Quite Stressed</td>
<td>12</td>
<td>26.7%</td>
</tr>
</tbody>
</table>
The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the HISD was significant, $F(2, 42) = 12.20$, $p < .001$, ETA$^2 = .18$. Scores on HISD range from 0 to 100, with higher scores indicating more sexual desire.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre-test M</th>
<th>Post-test M</th>
<th>Net difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx</td>
<td>32.33</td>
<td>46.28</td>
<td>13.95</td>
</tr>
<tr>
<td>WLC</td>
<td>30.57</td>
<td>32.82</td>
<td>2.25</td>
</tr>
<tr>
<td>MI</td>
<td>33.10</td>
<td>50.43</td>
<td>17.33</td>
</tr>
<tr>
<td>HI</td>
<td>31.56</td>
<td>42.13</td>
<td>10.57</td>
</tr>
</tbody>
</table>

Note. HISD = Hurlbert Index of Sexual Desire; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the HISD was significant, $F(2, 42) = 12.20$, $p < .001$, ETA$^2 = .18$. Scores on HISD range from 0 to 100, with higher scores indicating more sexual desire.
Table 3. Contrasts for HISD Total Scores by Condition ($N = 45$)

<table>
<thead>
<tr>
<th></th>
<th>$F$ Value</th>
<th>$P$</th>
<th>ES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx vs. WLC</td>
<td>20.68</td>
<td>&lt; .001</td>
<td>1.15</td>
</tr>
<tr>
<td>MI vs. WLC</td>
<td>24.20</td>
<td>&lt; .001</td>
<td>1.86</td>
</tr>
<tr>
<td>HI vs. WLC</td>
<td>8.62</td>
<td>&lt; .01</td>
<td>1.22</td>
</tr>
<tr>
<td>MI vs. HI</td>
<td>5.44</td>
<td>&lt; .05</td>
<td>0.77</td>
</tr>
</tbody>
</table>

*Note. HISD = Hurlbert Index of Sexual Desire; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. *ES= effect size in Cohen’s $d$.  

The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI was significant, $F(2, 42) = 7.83$, $p < .01$, ETA$^2 = .19$. Scores on FSFI Total range from 2.0 to 36.0, with higher scores indicating greater sexual functioning.

Table 4. FSFI Total Mean Scores by Condition ($N = 45$)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre-test M</th>
<th>Post-test M</th>
<th>Net difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx</td>
<td>17.73</td>
<td>23.94</td>
<td>6.21</td>
</tr>
<tr>
<td>WLC</td>
<td>20.96</td>
<td>21.26</td>
<td>0.30</td>
</tr>
<tr>
<td>MI</td>
<td>16.41</td>
<td>25.46</td>
<td>9.05</td>
</tr>
<tr>
<td>HI</td>
<td>19.05</td>
<td>22.41</td>
<td>3.36</td>
</tr>
</tbody>
</table>

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI was significant, $F(2, 42) = 7.83$, $p < .01$, ETA$^2 = .19$. Scores on FSFI Total range from 2.0 to 36.0, with higher scores indicating greater sexual functioning.
Table 5. Contrasts for FSFI Total Scores by Condition (N = 45)

<table>
<thead>
<tr>
<th></th>
<th>F Value</th>
<th>P</th>
<th>ES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx vs. WLC</td>
<td>9.86</td>
<td>&lt;.05</td>
<td>1.10</td>
</tr>
<tr>
<td>MI vs. WLC</td>
<td>15.24</td>
<td>&lt;.001</td>
<td>1.64</td>
</tr>
<tr>
<td>HI vs. WLC</td>
<td>2.18</td>
<td>=.15</td>
<td>--</td>
</tr>
<tr>
<td>MI vs. HI</td>
<td>7.21</td>
<td>&lt;.05</td>
<td>0.83</td>
</tr>
</tbody>
</table>

*Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. Non-significant (> .05) contrasts are listed accompanied by their specific p value. *ES= effect size in Cohen’s d.*
Table 6. FSFI Lubrication Mean Scores by Condition (N = 45)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre-test M</th>
<th>Post-test M</th>
<th>Net difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx</td>
<td>2.98</td>
<td>4.59</td>
<td>1.61</td>
</tr>
<tr>
<td>WLC</td>
<td>3.81</td>
<td>3.54</td>
<td>-0.27</td>
</tr>
<tr>
<td>MI</td>
<td>2.72</td>
<td>5.01</td>
<td>2.29</td>
</tr>
<tr>
<td>HI</td>
<td>3.23</td>
<td>4.17</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI Lubrication Subscale was significant, F(2, 42) = 11.27, p < .001, ETA² = .26. Scores on the FSFI Lubrication Subscale range from 0 to 6.0, with higher scores indicating higher greater lubrication.
Table 7. Contrasts for FSFI Lubrication Scores by Condition ($N = 45$)

<table>
<thead>
<tr>
<th></th>
<th>$F$ Value</th>
<th>$P$</th>
<th>$ES^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx vs. WLC</td>
<td>17.37</td>
<td>&lt;.001</td>
<td>1.19</td>
</tr>
<tr>
<td>MI vs. WLC</td>
<td>22.54</td>
<td>&lt;.001</td>
<td>1.42</td>
</tr>
<tr>
<td>HI vs. WLC</td>
<td>5.91</td>
<td>&lt;.05</td>
<td>0.59</td>
</tr>
<tr>
<td>MI vs. HI</td>
<td>6.99</td>
<td>&lt;.05</td>
<td>0.85</td>
</tr>
</tbody>
</table>

*Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. *$ES$= effect size in Cohen’s $d$.\)
The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI Orgasm Subscale was significant, $F(2, 42) = 8.50, p < .001$, $\eta^2 = .20$. Scores on FSFI Orgasm Subscale range from 0 to 6.0, with higher scores indicating better orgasm functioning.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre-test M</th>
<th>Post-test M</th>
<th>Net difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx</td>
<td>2.66</td>
<td>4.32</td>
<td>1.66</td>
</tr>
<tr>
<td>WLC</td>
<td>4.06</td>
<td>3.91</td>
<td>-0.15</td>
</tr>
<tr>
<td>MI</td>
<td>2.68</td>
<td>4.49</td>
<td>1.81</td>
</tr>
<tr>
<td>HI</td>
<td>2.63</td>
<td>4.14</td>
<td>1.51</td>
</tr>
</tbody>
</table>

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI Orgasm Subscale was significant, $F(2, 42) = 8.50, p < .001$, $\eta^2 = .20$. Scores on FSFI Orgasm Subscale range from 0 to 6.0, with higher scores indicating better orgasm functioning.
Table 9. Contrasts for FSFI Orgasm Scores by Condition (N = 45)

<table>
<thead>
<tr>
<th></th>
<th>F Value</th>
<th>P</th>
<th>ES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx vs. WLC</td>
<td>16.94</td>
<td>&lt;.001</td>
<td>0.67</td>
</tr>
<tr>
<td>MI vs. WLC</td>
<td>14.00</td>
<td>&lt;.001</td>
<td>1.26</td>
</tr>
<tr>
<td>HI vs. WLC</td>
<td>11.73</td>
<td>&lt;.001</td>
<td>1.09</td>
</tr>
<tr>
<td>MI vs. HI</td>
<td>0.37</td>
<td>=.55</td>
<td>--</td>
</tr>
</tbody>
</table>

= Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. Non-significant (> .05) contrasts are listed accompanied by their specific p value. *ES= effect size in Cohen’s d.  

Note. FSFI
The overall repeated measures ANOVA comparing the three conditions (MI, HI, and WLC) across time on the FSFI Satisfaction Subscale was significant, \( F(2, 42) = 4.45, \ p < .001, \) \( \eta^2 = .13. \) FSFI Satisfaction Subscale scores range from 0.8 to 6.0, with higher scores indicating higher levels of sexual satisfaction.

Table 10. FSFI Satisfaction Mean Scores by Condition \((N = 45)\)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pre-test M</th>
<th>Post-test M</th>
<th>Net difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx</td>
<td>3.20</td>
<td>4.45</td>
<td>1.25</td>
</tr>
<tr>
<td>WLC</td>
<td>3.17</td>
<td>3.29</td>
<td>0.12</td>
</tr>
<tr>
<td>MI</td>
<td>3.05</td>
<td>4.77</td>
<td>1.72</td>
</tr>
<tr>
<td>HI</td>
<td>3.34</td>
<td>4.12</td>
<td>0.78</td>
</tr>
</tbody>
</table>

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment.
<table>
<thead>
<tr>
<th></th>
<th>$F$ Value</th>
<th>$P$</th>
<th>$ES^*$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTx vs. WLC</td>
<td>6.25</td>
<td>&lt;.05</td>
<td>0.84</td>
</tr>
<tr>
<td>MI vs. WLC</td>
<td>8.83</td>
<td>&lt;.01</td>
<td>0.54</td>
</tr>
<tr>
<td>HI vs. WLC</td>
<td>1.75</td>
<td>=.19</td>
<td>--</td>
</tr>
<tr>
<td>MI vs. HI</td>
<td>3.41</td>
<td>=.07</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control; CTx = Combined Treatment. Non-significant (> .05) contrasts are listed accompanied by their specific $p$ value. *ES* = effect size in Cohen’s $d$.  


Figure 1. Plot display of interaction between condition and time for HISD Total Score ($N = 45$)

Note. HISD = Hurlbert Index of Sexual Desire; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control. Scores on HISD range from 0 to 100, with higher scores indicating more sexual desire.
Figure 2. Plot display of interaction between condition and time for FSFI Total Score ($N = 45$)

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control. Scores on FSFI Total range from 2.0 to 36.0, with higher scores indicating greater sexual functioning.
Figure 3. Plot display of interaction between condition and time for FSFI Lubrication Subscale 
(N = 45)

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control. Scores on the FSFI Lubrication Subscale range from 0 to 6.0, with higher scores indicating higher greater lubrication.
Figure 4. Plot display of interaction between condition and time for FSFI Orgasm Subscale
(N = 45)

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control. Scores on FSFI Orgasm Subscale range from 0 to 6.0, with higher scores indicating better orgasm functioning.
Figure 5. Plot display of interaction between condition and time for FSFI Satisfaction Subscale (N = 45)

Mean Satisfaction Score

Pre Post

Note. FSFI = Female Sexual Function Index; MI = Mintz Intervention; HI = Hall Intervention; WLC = Wait List Control. FSFI Satisfaction Subscale scores range from 0.8 to 6.0, with higher scores indicating higher levels of sexual satisfaction.
VITA

Alexandra M. Balzer was born October 21, 1983 in St. Louis, MO. She graduated from the University of Missouri in 2005 with a Bachelor’s Degree in Psychology and a Minor in Sociology. She earned a Master’s degree in Counseling Psychology from the University of Missouri in 2008. She will complete her predoctoral internship at the Oregon State University Counseling and Psychological Services Center in 2011-2012, and plans to pursue a career in clinical practice.