PREDICTORS OF SEXUAL FUNCTIONING AMONG ETHNICALLY DIVERSE COLLEGE-AGE WOMEN

A thesis submitted in partial fulfillment of the requirements
For the degree of Master of Arts in Psychology, Clinical Psychology

by

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ABSTRACT

PREDICTORS OF SEXUAL FUNCTIONING AMONG ETHNICALLY DIVERSE COLLEGE-AGE WOMEN

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The purpose of this study was to examine variables that are potential predictors of female sexual functioning. The archival data set used for this research included a sample of 252 college-age women (18-43 years-old). It was hypothesized that sexual self-efficacy, depression, anxiety, and six subscales of body image would predict sexual dysfunction in this sample of women. A multiple regression analysis revealed that the variables of anxiety and body image were not significant predictors of female sexual functioning. A review of literature on the subject offers an explanation for why this was the case. The analyses indicated that sexual self-efficacy and depression were significant predictive variables of female sexual functioning. Clinical implications associated with these findings are discussed.
CHAPTER I
INTRODUCTION

It is well known that the sexual aspects of the human experience make a significant contribution to a person’s quality of life (e.g., Laumann, Paik, & Rosen, 1999). The contribution of sex in a person’s quality of life gives credence to the importance of investigating the biological, physiological, and psychological determinates of sexual functioning. Indeed, the psychological contributions to human sexual response are critical in sexual functioning (Lykins, Jensen, & Graham, 2006), and are the emphasis of this investigation.

Statement of the Problem

As mentioned previously, sexual functioning significantly contributes to a person’s quality of life. Conversely, it follows that sexual dysfunction in these individuals’ lives can be detrimental to their quality of life. Laumann et al., (1999) conducted an analysis of the National Health and Social Life survey in which a sample of 1749 women and 1410 men, ages 18-59, responded to questions about sexual behavior, health, and quality of life. The impact of sexual dysfunction in this study was seen in the form of a diminished quality of life. Quality of life is a broad concept of general well-being and, in this case, has reference to several personal and interpersonal factors. According to the authors of this study, sexual dysfunction had a negative impact on romantic relationships, which is inherent given the nature of such relationships. The authors also found that the prevalence of sexual dysfunction in women constitutes a larger portion (43%) of the population experiencing sexual dysfunction compared to men (31%); this finding was mirrored in a similar study by Shifren, Monz, Russo, Segreti, and
Johannes (2008). Laumann et al., (1999) also found that the effects of sexual dysfunction tend to be more detrimental for women than men. Shifren et al., reported that distressing sexual problems among women peak in the middle-age years and occur more often in younger women than older women, with the exclusion of those undergoing menopause. Given these insights into the population of those experiencing sexual dysfunction, it is pertinent for the presenting study to focus on young women.

The etiology of sexual dysfunction can be rooted in many things, including biological mechanisms or psychological states (American Psychiatric Association [APA], 2000). The contributions of psychological states, primarily depression and anxiety, to the impairment of sexual functioning are foremost among the objectives of this study.

**Purpose**

The primary purpose of this investigation was to examine the predictive power of psychological variables, that is, body image (which is comprised of six sub-constructs relating to body attitude), depression, anxiety, and sexual self-efficacy in relation to female sexual functioning. In addition to the investigation of the predictive power of these variables and constructs, a secondary purpose of the study was to offer helpful information to those concerned with improving the health and quality of life of young women. It is hoped that some of the findings of this study will be helpful in providing concerned parties with information that could promote sexual functioning and improve the quality of the treatment of women living with a sexual dysfunction.

**Definitions**

1. According to the DSM-IV-TR (APA, 2000), sexual dysfunction refers to a disturbance in processes that characterize the sexual response cycle or pain associated
with sexual intercourse, which cause personal distress.

2. Sexual functioning refers to an overall positive evaluation of a sexual relationship; which includes the affective response of sexual satisfaction, perception that one’s sexual needs are being met, as well as fulfilling personal and the partner’s sexual expectations (Hurlbert, Apt, & Rambough, 1996; Lawrance & Byers, 1995).

3. Depression is characterized by disturbed mood, negative affect, as well as feelings of worthlessness and hopelessness, which impair cognitive functions and impairs overall functioning (Beck & Alford, 2009).

4. Anxiety is characterized by excessive worry and apprehensive anticipation (APA, 2000).

5. Sexual self-efficacy refers to individual’s beliefs that they are capable of successfully accomplishing behaviors as well as experiencing affective responses in a sexual context (Bailes et al., 1998).

6. Body image involves the appraisal of one's body through the attitudinal and affective components of perception and, for the purposes of this study, is synonymous with six body attitude scales on the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ) (Snell, 1998; Wade, Wilkinson, & Ben-Tovim, 2003).

**Theoretical Framework**

Although there is no formal theoretical framework for this investigation, it is helpful to conceptualize the influence of psychological states on sexual functioning within a theoretical approach. In the present study, the theoretical frameworks of Masters and Johnson (1970) as well as Kaplan (1974) were used as a premise for the observation
of sexual functioning through a psychological lens. This model emphasizes the impact of ‘self attentional’ factors and anxiety on sexual functioning/dysfunction. According to Masters and Johnson as well as Kaplan, anxiety and ‘self attentional’ factors are predictors of sexual dysfunction. The predictive format of this investigation is based, in-part, by this framework.

**Hypotheses**

Based on the review of literature contained in Chapter 2, the following research hypotheses were formulated.

1. Anxiety will significantly and positively predict sexual functioning.
2. Depression will significantly and negatively predict sexual functioning.
3. Sexual self-efficacy will significantly and positively predict sexual functioning.
4. Body image, as assessed utilizing the six body attitude scales, will significantly and positively predict sexual functioning.

**Assumptions**

The conceptualization of this research study was generated based upon particular assumptions. First, because of the educational status of the participants in the study, it was assumed that they had the ability to read and comprehend English and the ability to comprehend the items contained in the various questionnaires. Given the confidential nature of the questionnaires, it was also assumed that each response was given in earnest, and that the responses were complete. In addition, there was an assumption that those who gathered the data only recruited participants whose characteristics were consistent with the inclusion criteria. Finally, it was assumed that the data analyses were free of
errors that would compromise the integrity of the results.
CHAPTER II
REVIEW OF LITERATURE

The Human Sexual Response

The human sexual response has been classified into four stages or cyclic phases. These phases include: desire, excitement, orgasm, and resolution (American Psychiatric Association [APA], 2000). Definitions of each phase are included in the DSM IV-TR (APA, 2000). Sexual desire is defined as the desire to have sexual activity and consists of fantasies about sexual activity (APA, 2000). The same text defines excitement as “a subjective sense of sexual pleasure accompanying physiological changes” (p. 536) such as penile erection or vaginal lubrication and expansion. Orgasm, according to the DSM IV-TR, “consists of a peaking of sexual pleasure, with release of sexual tension and rhythmic contraction of the perineal muscles and reproductive organs,” while resolution constitutes “a sense of muscular relaxation and general well-being” (p. 536).

Sexual Functioning

Sexual functioning has been conceived as an overall evaluation of a sexual relationship, which includes the affective response of sexual satisfaction, perception that one’s sexual needs are being met, as well as fulfilling personal and partners’ sexual expectations (Hurlbert et al., 1996; Lawrance & Byers, 1995). Avis et al., (2005) reported significant results when investigating the relationship between variables that involve attitudes toward sex, relationship factors, cultural background, and sexual functioning. It seems pertinent, given the exclusive nature of diagnoses for sexual dysfunction, to state that the absence or lack of sexual dysfunction in a given individual does not necessarily
equate to high sexual functioning (Derogatis & Melisaratos, 1979). It could be argued that there is a range or continuum of sexual functioning and dysfunction. A review of the literature on sexual dysfunction provided herein offers a contrasting illustration of sexual functioning.

**Sexual Dysfunction**

The DSM IV-TR (APA, 2000) defines sexual dysfunction as “a disturbance in the process that characterize the sexual response cycle or by pain associated with intercourse” (p. 535). Given the progressive nature of the sexual response, to adversely affect the sexual response cycle would merely require the impediment or impairment of a given response phase. The etiology of sexual dysfunction can be rooted in biological mechanisms, physiological constraints, or psychological states (APA, 2000). A highly comorbid relationship exists between psychopathology (e.g., depression and anxiety) and sexual dysfunction (APA, 2000). Recurrent dysfunctional cognitive processes, accompanied with emotional distress, could explain the relationship between psychological states and sexual dysfunction (Anastasiadis, Davis, Chafar, & Burchardt 2002; Nobre & Pinto-Gouveia, 2008).

The impact of sexual dysfunction in a person’s life can be extremely detrimental. Many of the effects of sexual dysfunction are intuitive, based on the role of sex in the human experience. The impact can be seen in the form of a diminished quality of life, a negative influence on romantic relationships, as well as unhappiness and depression (Laumann et al., 1999). Mental health problems and economic problems, in addition to relationship problems and quality of life issues, have also been associated with sexual problems (Bancroft, Loftus, & Long, 2003). The causal relationship and directionality of
sexual functioning and psychological states has been debated for some time (Bradford & Meston, 2006).

**Female Sexual Dysfunction**

As already mentioned, it is well documented that women constitute a larger portion of the population who suffer from sexual dysfunction (Laumann et al., 1999; Shifren et al., 2008). It can be inferred, therefore, that a significant part of the female population is dealing with the detrimental effects of sexual dysfunction; hence, the urgent need for researchers to thoroughly investigate female sexual dysfunction. The relationship between mental health and female sexual functioning has been well documented, along with the impact that sexual disorders can have in women’s lives (Basson et al., 2001), particularly on their relationships (Aslan & Fynes, 2008; Raina et al., 2007), sense of self, and general psychological well-being (Ace, 2007).

**Depression as a Predictor of Female Sexual Dysfunction**

Depression has been observed as having a negative effect on sexual functioning (Frohlich & Meston, 2002). It is a common understanding that depression is associated with decreased interest in activities that are customarily pleasurable, including sex (APA, 2000; Lykins et al., 2006). However, it would be a mistake to automatically presume that depression affects each aspect of the sexual response cycle equally.

In a non-clinical sample of 94 college-age women, Frohlich and Meston (2002) observed that the sexual phases affected most by depressive symptoms were sexual excitement and orgasm. Frohlich and Meston also reported that women with depressive symptoms were no different than a non-depressed control group in their desire for sexual pleasure. Additional evidence obtained by these authors for the resilience of sexual desire
among depressed females was seen in an increased desire for the use of manual stimulation in this sample. Some researchers have reported that, for a portion of the female population, depressed states increase sexual desire (e.g., Lykins et al., 2006). At the same time, women with depression have been reported to have more than twice the odds of experiencing sexual problems than non-depressed women (Shifren et al., 2008). Therefore, it is apparent that depression has a significant comorbid relationship with sexual dysfunction (APA, 2000), but the exact manner in which it affects sexual functioning seems unclear (Elliott & O’Donohue, 1997).

**Anxiety as a Predictor of Sexual Functioning**

Anxiety is a broadly defined risk factor of sexual dysfunction and is characterized by excessive worry and apprehensive anticipation (APA, 2000). Similar to depression, anxiety has been given a generalized sense of interference with sexual functioning (APA, 2000). Although depression and anxiety are often seen as highly comorbid (APA, 2000; Rodney et al., 1997), it is presumptuous to assume that these states have the same effect on the sexual response cycle or that they have an identical effect on the sexual response cycle when identified as the aggravators of sexual dysfunction.

Masters and Johnson (1970) tested their assumptions about the effects of anxiety on sexual functioning experimentally by provocoking anxiety as a state-condition (e.g., threat of being shocked), and determined that state anxiety negatively affects sexual arousal. This framework was investigated and validated by researchers such as Beggs, Calhoun, and Wolchik (1987). However, other researchers’ results contradicted the findings of Masters and Johnson. Those with findings contrary to this framework suggested that anxiety either facilitates sexual arousal or has no effect on it (Elliott &
O’Donohue, 1997; Hoon, Wincze, & Hoon 1977; Laan, Everaerd, Aanhold, van Aanhold, & Rebel 1993; Laan, Everaerd, & Evers, 1995; Palace & Gorzalka, 1990; Pawlowski, 1979). Based on these findings, some researchers (e.g., Andersen & Cyranowski, 1995) concluded that the framework of Masters and Johnson concerning sexual arousal in women might be irrelevant or incorrect.

In a study on the effect of anxiety on sexual functioning, Vann Minnen and Kapman (2000) presented a significant point about the studies obtaining results that are contrary to the framework of Masters and Johnson (1970), as well as Kaplan (1974). Vann Minnen and Kapman pointed out that “enhancing rather than adverse effects of anxiety on sexual functioning [in those studies reporting that anxiety facilitates sexual functioning] can be explained by the process of labeling the autonomic response; the physiological response caused by the anxiety-provoking condition is, in combination with sexual cues, falsely labeled by the subjects as sexual arousal” (p. 48). Vann Minnen and Kapman also obtained findings in their research that validated the works of Masters and Johnson, as well as Kaplan, confirming that anxiety is a contributor to sexual dysfunction. The relevance of Vann Minnen and Kapman’s study is inherent in the unique characteristics of their clinical population of participants. Using a clinical sample of subjects who were already identified as experiencing anxiety may provide a more direct link of causality between anxiety and sexual dysfunction in this case. These authors reported significant co-morbidity between anxiety and sexual dysfunction. The specific phase of the sexual response cycle that was impaired for this sample of women was desire.

A study whose results acted somewhat as intermediaries for the discrepant
findings among the research was conducted by Bradford and Meston (2006). In this investigation, Bradford and Meston reported findings that validated parties on both sides of the argument. They discovered that moderate levels of state anxiety were positively correlated with indicators of higher sexual arousal. The manner in which anxiety impacts sexual arousal in women was not clearly established. Women being prone to develop anxiety may predispose them to developing nervous apprehension and worries about their intimate lives and sexual behavior, according to the aforementioned authors. Being preoccupied with sex-related fears can make it difficult for women to psychologically engage in sexual activity (Barlow, 1986).

It is notable that the participants in the study by Bradford and Meston (2006) came from a non-clinical population. These authors reported that no other forms of anxiety (e.g., dispositional or trait) were associated with indicators of sexual arousal. Thus, the various research findings related to sexual dysfunction and anxiety are likely to all have valid results, as they merely needed a clarification of anxiety’s constructs and operational definitions.

**Body Image as a Predictor of Sexual Functioning**

Current research indicates that negative body image is associated with increased sexual aversion; sexual aversion, in turn, appears to be related to negative sexual adjustment (e.g., Reissing, Laliberte’, & Davis, 2005). Wiederman (2000) found that, in a sample of 232 young women, increased levels of ‘body image self-consciousness’ were linked to infrequent sexual experiences, increased sexual avoidance, decreased assertiveness in situations of a sexual nature, and decreased sexual esteem. Positive body image has been associated with weight loss, an increased frequency of sexual activity,
and increased sexual drive (Werlinger, King, Clark, Pera, & Wincze, 1997). The adverse effect that negative body image has on sexual functioning may be due to a preoccupation with one’s perceived body image, prompting a ‘spectatoring’ state of mind described by Masters and Johnson (1970), which is an alleged source of dysfunction. ‘Spectatoring’ is one way in which individuals engage in ‘self-attentional’ states of mind where they engage in an observer’s perspective as though they are watching or looking at themselves as a third party. This body image preoccupation, if self-critical, induces a state of apprehension can negatively affect sexual functioning.

In a sample of 214 college-age women, Weaver and Byers (2006) found that positive body image was significantly related to sexual functioning. These results were obtained after controlling for body mass index (BMI) and level of exercise involvement. In spite of the observed relationship of BMI and exercise with body image, BMI and exercise were not predictors of sexual functioning. Wade et al., (2003) found that body image is relatively independent of BMI. It seems reasonable to conclude that a woman’s subjective perception of body image is significantly related to sexual functioning rather than body size and level of involvement in physical exercise. It is also notable to mention that in the study by Weaver and Byers (2006), as well as in research by Reissing et. al. (2005), positive body image did not predict sexual functioning but instead was merely related and associated with it.

These findings are consistent with the ‘self-attentional’ concepts in the framework of Masters and Johnson (1970). A woman’s perception of her body will determine her level of self-consciousness with her body regardless of her actual size or how often she
exercises. These considerations make negatively perceived body image a likely predictor of low sexual functioning.

**Sexual Self-Efficacy as a Predictor of Sexual Functioning**

Sexual self-efficacy has been associated with sexual adjustment and increased sexual activity both in men and women (Creti & Libman, 1989). An interesting side note to the findings of sexual self-efficacy and sexual functioning is the consistent prediction of risky sexual practices among those with low sexual self-efficacy (Reissing et al., 2005). One possible explanation for this association between risky sexual behavior and low sexual self-efficacy relates to the general level of confidence that a young woman has in her relationships. If a young woman lacks confidence in her ability to engage in sexual practices, her ability to assert sexually healthy and safe practices is also likely to be low especially in situations where she experiences sexual pressure from her partner (Bandura, 1990). There are very few studies that have included sexual self-efficacy in the investigation of sexual functioning. The consistent findings of Reissing et al., as well as Creti and Libman, compel researchers concerned with sexual functioning to investigate the predictive power of sexual self-efficacy on sexual functioning, as done in the present study.

**The Current Study**

Within the extensive body of research on the subject of sexual functioning, there are psychological domains, such as anxiety and depression, which have been studied at length while other domains involving constructs such as sexual self-efficacy, have received a very limited amount of attention. It is the aim of this investigation to provide additional information regarding the aforementioned psychological states and to give
further consideration to these under-investigated constructs and attitudes in relation to women’s sexual functioning.
CHAPTER III

METHODOLOGY

Procedures

An archival data set was used in the analyses of the variables. This data set was collected at California State University, Northridge (CSUN). The investigation was operated under the guidelines of the university’s institutional review board (IRB). Self-report data were administered to, and collected from, college-age female students. These women were recruited by means of the human research subject pool managed by the department of psychology. The screening criteria excluded those who had not engaged in at least one sexual encounter a year prior to the study. Precautions were taken during the participation of the subjects to ensure: proper ethical treatment, accurate handling of data, and the preservation of confidentiality. Subjects were offered information about mental health services and debriefed following their participation.

Sample

College-age women ($N = 252$) enrolled at CSUN volunteered to participate in this study. The mean age of the participants was 20.08 years old with an age range of 18 to 43 years. In this sample, 84% of the respondents were single, whereas 13% were living with a significant other or married. The diversity of the sample is manifest in 36.9% of the participants being Hispanic/Latino participants ($N = 93$), 21.8% consisting of Caucasians ($N = 55$), 10.7% being African American ($N = 27$), 9.9% being of Asian descent ($N = 25$), 11.9% being of mixed ethnicity ($N = 30$), and 8.7% reporting “other” ethnicities ($N = 22$), including Middle Eastern and Armenian subjects. Religiously affiliated participants were represented as being Christian (78.2%), Atheist/Agnostic (10.3%), Jewish (4.8%),
Buddhist (2.8%), and Muslim (1.6%); 2.4% of the women recruited chose ‘other’ as their religious affiliation.

Measurement

Clinical measures and self-report questionnaires were the means of collecting data from the participants of the study.

Sexual Functioning Assessment

The Female Sexual Functioning Index (FSFI) was validated by trials with a clinical sample of women who had been diagnosed with a sexual dysfunction (Rosen et al., 2000). The use of this measure has been determined as psychometrically sound by its authors, as it demonstrated its ability to discriminate between clinical and non-clinical participants. A subsequent validation of this instrument was observed in a follow up study in which an internal consistency reliability of .94 (Cronbach’s alpha) was found (Masheb, Lozano-Blanco, Kohorn, Minkin, & Kerns, 2004). An identical reliability of .94 (Cronbach’s alpha) was observed in the data on which the present analyses were based. Sample item from the FSFI follows: During the past 4 weeks how confident were about becoming sexually aroused during sexual activity or intercourse? Response choices include the following assigned values: 0 “No sexual activity”, 5 “Very high confidence”, 4 “High confidence”, 3 “Moderate confidence”, 2 “Low confidence”, 1 “Very low or no confidence”.

Psychological Measures

Depression. The BDI-II, or Beck Depression Inventory II, was used to assess depressive symptomatology in participants of the study (Beck, Steer, & Brown, 1996). The inventory includes 21-items, designed to measure an adult’s propensity for
depression based on the indication of items that reflect depressive symptoms. Scores on the test range from 0, which would be a complete absence of depression, to 63, an indication of severe depression. An internal consistency reliability of .93 was observed in the aforementioned study which included a population of college students. The present data set resulted in an observed Cronbach’s alpha of .89. An item sample from the BDI-II follows: Punishment Feelings: 0 I don’t feel I’m being punished, 1 I feel I may be punished, 2 I expect to be punished, 3-I feel I am being punished.

**Anxiety.** The Beck Anxiety Inventory (BAI) was used as a measure of anxiety—which includes items that are indicative of the symptomatology of anxiety in adults (Beck & Steer, 1990). Elevated scores on the BAI are an indication of heightened levels of anxiety and vice versa. The authors of the BAI reported excellent internal consistency reliability (Cronbach’s alpha of approximately .93) in adults (Beck & Steer, 1990). A Cronbach’s alpha of .90 was obtained for the present study. Items on the BAI are rated by the respondent with options of “not at all” indicated by circling the number 0, “Mildly, It didn’t bother me much” indicated by the number 1, “Moderately, It was very unpleasant but I could stand it,” indicated by the number 2, and “Severely, I could barely stand it,” indicated by the number 3.

**Psychosexual constructs.** Subscales from the Multidimensional Sexual Self-Concept Questionnaire (MSSCQ), provided a quantification of various psychological aspects that contribute to human sexuality—namely: sexual depression, sexual self-efficacy, sexual satisfaction, and sexual self-schemata (Snell, 1998). Response items in these subscales ranged from *not at all characteristic of me* (0) to *very characteristic of me* (4). Previously observed internal consistency reliability (i.e., Cronbach’s alpha) for all
four subscales range from .85 to .91 as reported by Snell. A similar reliability was observed in the analyses for this study (the range of alphas was .83-.87 on the subscales). The only scale used from this questionnaire was the scale quantifying sexual self-efficacy (which had a Cronbach alpha of .85).

Subscales from the Ben-Tovim Walker Body Attitudes Questionnaire (BAQ) were used to assess a range of attitudes that participants had toward their own bodies (Ben-Tomvin & Walker, 1991). Participants were asked to respond to questions with one of the five weighted choice responses: Strongly agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly Disagree = 1. A sample item from the measure is as follows: People avoid me because of my looks. The BAQ is a 44-item self-report questionnaire. Its subscales comprise six distinguishing features of body experience (i.e. feelings of overall fatness, self-disparagement, strength, salience of weight, feelings of attractiveness, and consciousness of lower body fat). A split-halves correlation of .92 (Richardson correlation coefficient) was reported for test reliability (Ben-Tomvin & Walker, 1991). The total BAQ scores, following a test-retest examination, revealed significant correlations (all were $p < .001$) between the test trials ($r = .83$). Subscale correlations of scores were: “feeling fat” ($r = .90$); “body disparagement” ($r = .76$); “strength and fitness” ($r = .79$); “salience of weight and shape” ($r = .64$); “attractiveness” ($r = .65$); “lower body fatness” ($r = .91$). The BAQ has shown a satisfactory degree of reliability. Validation studies in which researchers compared the BAQ to other measures of physical appearance that have comparable constructs achieved a satisfactory correlation between subscales ($r = .87$) (Ben-Tomvin & Walker, 1991).
CHAPTER IV

RESULTS

Descriptive statistics are reported in Table 1. SPSS 17.0 software for windows was used to conduct the analyses.

Table 1

Descriptive Statistics for the Independent and Dependent Variables (N = 252)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Range</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Sexual Functioning</td>
<td>3-36</td>
<td>27.94</td>
<td>5.75</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0-48</td>
<td>13.44</td>
<td>10.00</td>
</tr>
<tr>
<td>Depression</td>
<td>0-41</td>
<td>10.28</td>
<td>7.80</td>
</tr>
<tr>
<td>Sexual Self Efficacy</td>
<td>0-41</td>
<td>2.58</td>
<td>.96</td>
</tr>
<tr>
<td>Body Attitudes-Attractiveness</td>
<td>10-25</td>
<td>19.37</td>
<td>3.15</td>
</tr>
<tr>
<td>Body Attitudes-Disparagement</td>
<td>8-27</td>
<td>13.62</td>
<td>3.91</td>
</tr>
<tr>
<td>Body Attitudes-Feeling Fat</td>
<td>13-63</td>
<td>35.87</td>
<td>11.98</td>
</tr>
<tr>
<td>Body Attitudes-Salience</td>
<td>9-38</td>
<td>20.53</td>
<td>5.63</td>
</tr>
<tr>
<td>Body Attitudes-Lower Body Fatness</td>
<td>4-20</td>
<td>9.80</td>
<td>3.54</td>
</tr>
<tr>
<td>Body Attitudes-Strength/Fitness</td>
<td>8-30</td>
<td>19.97</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Zero-Order Correlations

Pearson correlations were calculated to quantify the bivariate relationships between the variables in the study. The intercorrelational matrix in Table 2 indicates that sexual functioning is significantly and negatively correlated with depression ($r^2 = -.38$, $p < .01$). A significant positive correlation was found between sexual functioning and
sexual self-efficacy ($r^2 = .26, p < .01$). The body image variables of salience ($r^2 = -.16, p < .01$), disparagement ($r^2 = -.18, p < .01$), and lower body fatness ($r^2 = -.12, p < .01$) were significantly and negatively correlated with sexual functioning. The body image variables of attractiveness ($r^2 = .09, p > .05$) and strength/fitness ($r^2 = .08, p > .05$) were not significantly related to sexual function.

Table # 2
Summary of Zero-Order Correlational Analyses on the Sample’s Reports of IVs and DV (N = 252)

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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<tbody>
<tr>
<td>1. Female Sexual Functioning</td>
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<tr>
<td>2. Depression</td>
<td></td>
<td>-.38**</td>
<td>1.00</td>
<td></td>
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<td></td>
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<tr>
<td>3. Sexual Self-Efficacy</td>
<td></td>
<td>.26**</td>
<td>-.11*</td>
<td>1.00</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>4. BA-Attractive</td>
<td></td>
<td>.09</td>
<td>-.17</td>
<td>.30</td>
<td>1.00</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. BA-Disparagement</td>
<td></td>
<td>-.18**</td>
<td>.24**</td>
<td>-.28**</td>
<td>-.54**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>6. BA-Salience</td>
<td></td>
<td>-.16**</td>
<td>.25**</td>
<td>-.10</td>
<td>-.24**</td>
<td>.56**</td>
<td>1.00</td>
<td></td>
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<tr>
<td>7. BA-Lower Body Fatness</td>
<td></td>
<td>-.12**</td>
<td>.26**</td>
<td>-.01</td>
<td>-.15**</td>
<td>.44</td>
<td>.51**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. BA-Strength/Fitness</td>
<td></td>
<td>.08</td>
<td>-.26**</td>
<td>.13</td>
<td>.26**</td>
<td>-.25**</td>
<td>-.12*</td>
<td>-.11*</td>
<td>1.00</td>
<td></td>
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<tr>
<td>9. BA-Feeling Fat</td>
<td></td>
<td>-.14*</td>
<td>.26**</td>
<td>.00</td>
<td>-.22**</td>
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<td>-.16**</td>
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<td>10. Anxiety</td>
<td></td>
<td>-.11*</td>
<td>.47**</td>
<td>.03</td>
<td>-.16**</td>
<td>.15**</td>
<td>.25**</td>
<td>.12*</td>
<td>-.08</td>
<td>.09**</td>
</tr>
</tbody>
</table>

Notes: BA = Body Attitude, *p < .05; **p < .01; N = 252

**Multiple Regression Analyses**

A multiple regression analysis was used to assess (1) the contributions of the sets of predictor variables (i.e., sexual self-efficacy, depression, anxiety, and body image variables) in explaining the variance in female sexual functioning, and (2) the significance level of the beta coefficients within the regression model (Pedhazur, 1982).
At the beginning of the analysis there were 252 participants in the sample; however, two participants were excluded because of incomplete data. As shown in Table 2, there was no significant multicollinearity among the predictors.

When predicting the outcome variable of female sexual functioning, those variables showing significance were depression ($\beta = -.40, p < .01$) and sexual self-efficacy ($\beta = .22, p < .01$). Body image (which includes the six body attitude scales) and anxiety were not significant ($p > .05$) predictors of female sexual functioning. The set of predictor variables accounted for 21% of the variance in female sexual functioning.

Table # 3
Summary of a Multiple Regression Analysis on the Total Sample regarding the relationship of Sexual Self Efficacy, Anxiety, Depression, Six Scales of Body Image to Female Sexual Functioning (N = 250)

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>b</th>
<th>SE</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexual Self Efficacy</td>
<td>1.33</td>
<td>.38</td>
<td>.22**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.04</td>
<td>.04</td>
<td>.07</td>
</tr>
<tr>
<td>Depression</td>
<td>-.30</td>
<td>.05</td>
<td>-.40**</td>
</tr>
<tr>
<td>BA-Attractiveness</td>
<td>-.12</td>
<td>.13</td>
<td>-.07</td>
</tr>
<tr>
<td>BA-Disparagement</td>
<td>-.11</td>
<td>.13</td>
<td>-.07</td>
</tr>
<tr>
<td>BA-Feeling Fat</td>
<td>-.04</td>
<td>.05</td>
<td>-.08</td>
</tr>
<tr>
<td>BA-Salience</td>
<td>.04</td>
<td>.09</td>
<td>.04</td>
</tr>
<tr>
<td>BA-Lower Body Fatness</td>
<td>.03</td>
<td>.12</td>
<td>.02</td>
</tr>
<tr>
<td>BA-Strength/Fitness</td>
<td>-.08</td>
<td>.10</td>
<td>-.05</td>
</tr>
<tr>
<td>--------------------</td>
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<td>------</td>
</tr>
</tbody>
</table>

*Multiple R = .46*

\[ R^2 = .21 \]

*Adjusted R^2 = .18*

*F-Value = 7.03**

Notes: \( b \) = unstandardized betas; \( \beta \) = standardized betas

*\( p < .05 \); **\( p < .01 \)
CHAPTER V
DISCUSSION

The purpose of this study was to identify psychological predictors of female sexual functioning. The contributions of psychological states to sexual functioning and sexual dysfunction are well-established in the scientific field (APA, 2000). Depression and anxiety, typically seen as comorbid themselves, are the most common comorbid pathologic diagnoses associated with sexual dysfunction, and are often seen as the etiology and predictive variables of sexual dysfunction (Frohlich & Meston, 2002).

Only a limited number of studies exist that investigated the impact of non-clinical (pathological) psychological constructs on sexual functioning. Among those limited resources, body image and sexual self-efficacy have been observed to have significant predictive abilities in relation to sexual functioning and dysfunction (Reissing et al., 2005; Weaver & Byers, 2006).

Discussion of the Findings

In the current investigation, depression had a significant negative relationship with sexual functioning. This was not a revelation but a finding that is consistently with most of the literature available (e.g., APA, 2000). Although depression has often been observed as undermining female sexual functioning, the exact manner in which it affects sexual functioning has been unclear (Elliott & O’Donohue, 1997). This is especially true when considering the inconsistent findings of research concerning its relation to the phases of the sexual response cycle. Frohlich and Meston (2002) reported that women with depressive symptoms had no decrease in desire for sexual pleasure compared to those devoid of depressive symptoms. In addition, women with depressive symptoms
were observed as having an increased desire for manual stimulation. Other researchers have reported a general increase in sexual desire for women with depression (e.g., Lykins et al., 2006). Yet women with depression have also been found as having more than twice the odds of experiencing sexual problems than non-depressed women (e.g., Shifren et al., 2008). Therefore, women who are depressed are likely to experience sexual dysfunction, but the inconsistency in these studies makes the mechanism or phase of sexual functioning affected by depression unclear. In future research, interested scholars should investigate the mechanisms and utilities of female sexual functioning that are affected by depression. Perhaps it would be optimal to use structural equation modeling procedures or other analyses that can best control for anxiety and body image.

Sexual self-efficacy was found as having a significant and positive relationship with sexual functioning. This is especially significant because of the number of variables included in the analysis. This finding is consistent with the work of Reissing et al., (2005) as well as Creti and Libman (1989), in which sexual self-efficacy was observed as a mediator of sexual self-schema and sexual adjustment. Sexual self-efficacy by definition is the belief/confidence that an individual has in being able to engage in sexual behaviors (Bailes et al., 1998), and seems to be an antecedent of sexual functioning. The significance of this finding must be stressed, especially when it has been observed to predict sexual functioning, while positive perceived body image has only a correlational relationship with it. The significance of sexual self-efficacy in the current study suggests that confidence in engaging in sexual behaviors might promote higher levels of sexual functioning. Additional research on the subject should focus on the remedial implications of sexual self-efficacy on sexual dysfunction and its clinical therapeutic implications.
Literature related to predictors of sexual functioning suggests that moderate levels of anxiety seem to promote sexual functioning, while low or elevated levels of anxiety inhibit it (Bradford & Meston, 2006). Surprisingly, contrary to the research hypothesis, anxiety was not observed to be a significant predictor of female sexual functioning. There are a few explanations for this finding. For instance, the participants included in this study were all students, thus possibly more likely to have a mild to moderate amount of anxiety; therefore, were not in a state of anxiety that typically inhibits sexual functioning. Cvetkovski, Reavley, and Jorm (2012) reported that college students do indeed tend to have moderate levels of distress or anxiety compared to the general population. It should be noted that the sample of women in the study by Bradford and Meston was a non-clinical sample. A comparative clinical sample in a study by Vann Minnen and Kapman (2000) had comorbid anxiety and symptoms of sexual dysfunction. This may suggest that the women in the non-clinical sample of Bradford and Meston who reported a heightened state of anxiety could have experienced a similar sexual physiological response to the clinical sample of Vann Minnen and Kapman. Future studies should investigate clinical levels of anxiety as potential risk factors for sexual dysfunction in non-clinical samples.

Although some of the variables related to body image (e.g., salience, disparagement, and lower body fatness) were significantly correlated with sexual dysfunction, the regression analysis did not reveal significance between body image and sexual dysfunction. The strength of the significance between depression and sexual dysfunction in the analysis likely overshadowed body image and drove the significance of the regression analysis. This information should be considered while interpreting the analysis as it relates to body image as well as anxiety. Future studies should investigate
body image as a potential moderator of depression and sexual functioning. Structural equation modeling may be the proper type of analysis for the prediction of sexual functioning from the present set of predictor variables.

Although negative body image was found to be a significant predictor of sexual dysfunction in previous studies, positive body image has not been observed as predicting sexual functioning in this study. Positive body image has been correlated with weight loss, increased sexual drive, and an increased frequency of sexual activity (e.g., Werlinger et al., 1997), but it was not a predictive variable in the present investigation. However, although a woman’s negative perception of her body seems to predict sexual dysfunction, sexual functioning is a very complex aspect of human functioning that is comprised of more than positive physical self-perception.

Another possible explanation for the lack of significance in the variables of anxiety and body image could involve the nature of the present sample. Unlike previous studies conducted on the subject, our study included a sample that was very ethnically diverse. It is possible that body image interferes more with sexual functioning within the predominantly studied Caucasian samples of women compared to women of a different cultural background. In support of this speculation, Avis et al., (2005) reported that African American women engaged in sexual activity more frequently than Caucasian women, and they also found significant differences in the levels of arousal among various cultures. Heiman (2002) found that Hispanic women reported less dysfunction than their Caucasian and Black counterparts. In a cross-sectional study of 1,944 women living in the U.S., West et al., (2008) reported that Black women had the lowest prevalence of low sexual desire and hypoactive sexual desire disorder. Perhaps ethnicity as well as
acculturation should be controlled for in the analysis of future investigations. There may be aggravating or buffering factors associated with culture and sexual functioning that should be investigated in future studies.

**Limitations and Research Implications**

**Limitations**

Various limitations to the current study should be acknowledged. Among them, the sample was a young representation of the population and covered only one national geographical location. Therefore, the results cannot be generalized to the entire population. Next, this cross-sectional study only represents a small segment of a woman’s life and does not provide the ability to describe the relationship between mental states, constructs, and female sexual functioning over time. Also, demographic characteristics of the sample were not included in this study because they were not a part of the central hypotheses of the study; however, they could have an important role in the prediction of female sexual functioning.

A major limitation of the study was the use of the total score in the analysis of general sexual functioning, rather than using subcomponents and individual scores of sexual functioning for the analyses. This did not allow an examination of whether the predictor variables were significant regarding specific phases of the sexual response cycle.

An additional limitation is related to the use of self-report questionnaires, which is an imperfect means of investigation (Wiederman, 1999). Finally, the direction of causality within the relationship between sexual dysfunction and depression or anxiety could be reciprocal and perpetual. Therefore, in individual cases the nature of this relationship
should be investigated when determining a cause of sexual dysfunction or depression.

**Research and Clinical Implications**

Keeping in mind the limitations of the study, certain implications for researchers and practitioners arise. First, future studies should assess predictors of each of the subcomponents of sexual functioning, such as desire and orgasm. Additional research in this area should include the use of demographical information and investigate the influence of such factors as age, religion, income, and occupation, on sexual functioning. Also, future analyses should include the use of structural equation modeling procedures that can include controls for body image and ethnicity while considering depression and anxiety separately. It would be pertinent to assess the effects of these mental states on the different phases of the sexual response cycle.

Sexual self-efficacy should be rigorously investigated not only as a predictor of sexual functioning, but also in the treatment of those experiencing sexual dysfunction. Palace (1995) reported that positive and negative feedback on sexual response can affect self-efficacy. Thus, educational and therapeutic settings seem to be a potential source of effective and positive change in sexual functioning.

In regards to practice implications, efforts to address low sexual self-efficacy may be the most direct and effective way of modifying negative sexual self-schema that has been found by researchers to perpetuate negative sexual adjustment in young women. Also, clinicians should be attentive to the potential comorbid pathology in their female patients who report having sexual problems. The treatment of depression in women experiencing sexual dysfunction is vital to ameliorating their sexual challenges.
Conclusion

This study was conducted in order to identify psychological predictors of sexual functioning. Anxiety, depression, sexual self-efficacy, and body image were the psychological states and constructs that were hypothesized to predict sexual functioning. While anxiety and body image were not significant predictors of sexual functioning in the regression analysis, sexual self-efficacy had a significant positive relationship with sexual functioning, while depression had a significant negative relationship with sexual functioning. The relationship of sexual self-efficacy and sexual functioning encourages the use of therapeutic and educational settings to promote effective change. More studies are certainly needed in order to clarify the predictive value of the variables used in the present study for young women’s sexual functioning, in particular for specific phases of sexual functioning.
REFERENCES


