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STRESS AND SEXUAL FUNCTIONING OF WOMEN

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This dissertation submitted by Brenda J. Singrossi has been read and approved by three faculty members of the American Academy of Clinical Sexologists at Maimonides University.

The final copies have been examined by the Dissertation Committee and the signatures, which appear here, verify the fact that any necessary changes have been incorporated and that the dissertation is now given the final approval with reference to content, form and mechanical accuracy. The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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This paper is dedicated to my family, for which I am truly blessed. I love you all.

VITA

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Abstract

This in-depth study of female sexual functioning gives background and current information on the research that has been conducted in this specialty area. Women around the world are concerned with the impact of stress on their overall sexual functioning, and so are the men in their lives. Sexuality among women is a highly talked about subject between women, but it has not received the level of research it deserves. There is great need for extensive research on sexual functioning issues for women today.

Researchers including Kinsey, Masters and Johnson, Sherfey, Davis, Newton, Schaefer, Blackwell, Wright and Dickinson have all completed important initial research in the area of sexuality. Their studies are discussed along with many other researchers in the field of sexuality and sexual dysfunction. The current research on sexual dysfunction and its causes is discussed as well as current research on stress and sexual functioning. The literature review contains many research studies that address the physical sexual functioning of women, but there is limited research on how a specific factor, such as stress, can impact a woman's overall sexual functioning.

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Stress and Sexual Functioning Among Women

Hypothesis: Increased stress will adversely impact the sexual functioning of women.

Definition

"**stress**, *n*. Psychol. and Biol. An adverse circumstance that disturbs, or is likely to disturb, the normal physiological or psychological functioning of an individual; such circumstances collectively. Also, the disturbed state that results."

Introduction

It is now more widely understood that female sexual dysfunction is the result of an array of causes. Some are physical causes, but emotional, social, and environmental stresses are thought to also contribute to the overall sexual functioning of women. (Williams 1984)

Studies estimate that at any given time, 10 percent of women are completely anorgasmic. Inhibited sexual desire, a complaint of a growing lack of interest in

sexual activity, is a complaint of 20 percent of adult women (Frank, E., Anderson, C., & Rubinstein, D. 1978).

Sexual problems can have a ripple effect on many other areas of women's lives, including intimate relationships with a partner, the family, work, and general well being (A.T. Beck & Freemen, 1990).

The stresses of daily life become overwhelming to some women, and they are not able to separate themselves from that stress (Elkin 1999). Instead of experiencing sex as an enjoyable interaction with the one they love, women are viewing sex as just another stressor in their lives. (Elkin 1999).

When an individual or her partner is experiencing problems with sex, she is not alone. Recent studies reveal that nearly 40 percent of women of all ages report having sexual problems. (Wolfe,1974).

Sexual dysfunction is a broad term that includes many different sexual acts. Women who suffer from sexual dysfunction may have problems with desire, intercourse, or orgasm. These individuals may experience their problems while with a partner or alone (Williams 1984).

Purpose and Methodology

This research paper is intended to describe research relating to the impact of stress as it adversely impacts the sexual functioning of women. The goal is to present the context of stress as reported in the literature, and to examine the impact that this has on the well being of women. The literature review includes published academic research, books, and journals. It includes publications authored by American and non-American authors and ranges from present-day researchers to pioneers in authors and the field of women's sexuality, including Clelia Mosher (1863 – 1940), Katherine Bement Davis (1860 – 1935), and Robert Latou Dickinson (1861 – 1950). published in journals. Key international studies were also included.

Search strategies combined key words relating to stress and sexual functioning, including women's sexuality, relationship stress, and emotions. In addition, the key words stress and sexual functioning were combined with health outcomes, including emotional health and well being, mental health, and physical health.

Framework and Analysis

The literature that was identified through this search has been organized into two branches: stress as it relates to women, and the impact of stress on sexual functioning.

The term "sex" is not limited to intercourse; it refers to a variety of intimate sexual activities such as fondling, self-stimulation, and oral sex (Williams 1984). A woman's sexual problems are generally defined as problems that occur in the course of sexual activity, including: trouble becoming aroused, excessive dryness; difficulty having orgasms; pain during sexual intercourse or pain related to other sexual activity.

Most women experience one or more sexual problems intermittently. It is when such problems are persistent that the woman and her partner enter the area defined as sexual dysfunction (Weinberg 1983). Sexual problems can be influenced by a wide variety of factors. There are two main components to sexual dysfunction--biological components and psychological components. Biological problems involve hormonal imbalances, infections (like yeast infections), or diseases (such as diabetes or multiple sclerosis) which have potential side effects including pain during sex or excessive dryness (Williams 1984).

The literature indicates there are certain times in a woman's life when she is more prone to sexual problems because of hormonal changes (Ludwig 1993). Some women experience a range of sexual problems right after childbirth; some experience them during menopause. Also, commonly prescribed medications, such as certain antidepressants, can stimulate negative sexual side effects.

Researchers now suggest that from birth throughout her life, every woman is developing a unique "sexual story" influenced by culture, gender, family of origin, and personal experiences. The "story" is founded on the beliefs and meanings a woman she attributes to her sexuality (Laws 1977). Couples must negotiate their personal "sexual stories" before they can develop their own style of sexual communication and activity. This negotiation should be an ongoing process. Everyday life problems may become obstacles to intimacy and sexuality. Job worries, pressures of juggling work and family, substance abuse, depression, and financial worries can all influence how an individual feels sexually (Williams 1984).

As of this writing, there are but a few approved drugs available to help improve women's sexual functioning. Therapy, however, is readily available to most women. Therapy, either alone or with a partner, can help women who are experiencing sexual problems. Most therapists are trained in how to talk to couples about their sexual lives. The therapist can help the woman and her partner gain

understanding of their relationship dynamics and any background issues that may be contributing to their problems. The therapist can also provide clients with information about human sexuality, sexual functioning, and sexual dysfunction.

Even when there is no discernable sexual dysfunction, it is still important for women to understand how stress affects their overall sexual functioning (Wolpe 1977). To understand women's sexual functioning today, it is necessary to go back into history and look at the evolution of women's sexual health.

Although Freud did not specifically study the sexual functioning of women he did begin the discussion of sex and women. His original research was groundbreaking and a necessary part of the evolution of sexual functioning research (Eysenck 1990).

Important research on female sexuality can be found as early as the late 1800s (Brecher, 1969). Elizabeth Blackwell, in *Essays in Medical Sociology* (1894, 1902), suggested that women had a passive role in sex, a role not to be enjoyed, and she doubted the physical ability of women to achieve true orgasms. Blackwell's view of sex for women reflected the social attitudes of her time. It was founded on control of a woman through shame and guilt (Brecher, 1969).

Ellis's *Studies in the Psychology of Sex* (1936) took a more modern view of women and the female orgasm, and it viewed sexuality as a normal human function rather than a deviant one, an attitude that would continue through the work of more recent researchers such as Masters and Johnson. Ellis's findings regarding female sexuality included: that women experience sexual desire; that orgasm in females is similar to orgasm in males; that frigidity is psychological in nature; and that the repression of sexuality in girls and adolescents contributes to adult frigidity.

Dickinson (1932) was also interested in the negative effects on female sexuality brought on by societal vales in the nineteenth century. Dickinson found that a majority of his females interviewees had come to separate marital sex from marital love, considering the former to be bad and the latter to be good.

The research of Leah Cahan Schaefer (1964) found that women born in the United States in the 1930s and 1940s had internalized the values of earlier generations. They considered all sex to be taboo and shameful except in marriage. They experienced anxiety and shame towards their own sexuality. Their knowledge of sexuality was limited and full of misconceptions. Schaefer concluded that repression in youth spoiled enjoyment of future sexual experiences (Schaefer, 1964).

The work of Mary Jane Sherfey (1963) explained women's sexual pleasure via a biological approach, focusing on the complexities of the female clitoral system.

Sherfey attempted to explain sexual repression based on socio-cultural-historical reasons, and she predicted changes ahead in women's sexuality and sexual freedom due to medical advances in contraception.

Research on sexual development in the last century has propelled issues regarding women's sexual health to the forefront of societal concerns (Shifren 2004). Many researchers have continued to build on the body of work done in the field of sexual health and sexual functioning. Sexual behavior in women was evolving into a new and exciting form (Sherfey 1972).

Robert Latou Dickinson (1861—1950) theorized that the many difficulties his female patients reported—including insomnia, menstrual irregularities, and certain types of pain—had their roots in sexual problems. Alfred C. Kinsey and his colleagues built on Dickinson's work, conducting large-scale studies on sexual behavior including *Sexual Behavior in the Human Male* (1948) and *Sexual Behavior in the Human Female* (1953).

Kinsey was a professor at a Midwestern State University and a zoologist by training. He began to survey his students regarding their sexual lives for the purpose of updating his teaching material on marriage. He started his research in the 1930's when surveys using statistics were emerging as important factors in market research and were just beginning to be adopted for political polling. Over the next twenty

years, Kinsey and his colleagues used their surveys to obtain information about the sex lives of over 17,000 people (Kinsey 1948).

In 1966, William Masters and Virginia Johnson published their research in a paper titled *Human Sexual Response*. Their research pioneered techniques that could be used in laboratories to measure what happens physiologically when people become sexually aroused. They were able to apply laboratory techniques to measure the physiology of an orgasm.

Masters and Johnson then applied their learning to treat people having dysfunctional sexual responses (Masters 1970). Many sexual therapies practiced today are based on Masters and Johnson research.

Stress and Sexuality

The word “stress” has come to describe a complex of outside pressures bearing down on the human mind and body. How can stress effect sexual motivation and sexual drive?

Women have had to deal with an expanding complex of pressures since the era of Kinsey and Masters and Johnson. They are now experiencing stress while trying

to balance work, family life, and marriage. This stress can often lead to an overall decrease in sexual functioning for many women (Elkin 1999).

This decrease in sexual functioning can result from a variety of pressures: stress over work life, stress over family responsibilities, emotional changes and worry over sexual performance. Women are overwhelmed with responsibilities and stressors, often making it difficult to be able to give fully of themselves while engaged in sexual activity (Elkin 1999). Everyday events in a woman's life are the most common stressors, including worry about bills and worry about family members. Whether a woman is staying home to care for children or working a nine-to-five job, she will experience stress throughout her day (Goldberg 2002).

Stressors can be divided into the external and internal. External stressors are events that are not always controllable. External stressors include the physical environment, social interactions, major life events, and daily tasks (Pettinger 2002).

The rules, regulations, deadlines, and other confines of an employer can prove more stressful to women than to men. Within the organization the woman may also be faced with other specific stressors from individuals on a social level as well as the organizational level (Foley 2002).

Major life events such as the birth of a child, the death of a loved one, the loss of a job, or a change in martial status can all cause tremendous stress in the life of a woman (Pettinger 2002).

The daily hassles of commuting, caring for kids, or misplacing car keys can contribute to the overall stress level in a woman's life. Women who have a disorganized life may feel more stress from the chaos going on around them, but even women who keep an organized daily routine can experience stress from their daily hassles (Pettinger 2002). All of these stressors are instrumental in providing a decreased interest in sexual relations (Pettinger 2002).

Internal stressors describe the changeable ways that we think and act (Pettinger 2002). Internal stressors include lifestyle choices, negative self-talk, mind traps, and personality traits.

Caffeine, lack of sleep, and overloaded schedules represent the top stressors in women's lifestyle choices. Many women juggle home and work, needing to rely on caffeine to get them through their long and exhausting days (Kalynchuk 2004).

Negative self-talk describes pessimistic thinking and self-criticism. Women who practice this type of thinking have a difficult time letting go of the stress they are carrying around (Pettinger 2002).

Mind traps is a term that describes the unrealistic expectations that women put on themselves today. They over-book and overwork themselves, but still expect to be able to complete everything that needs to be done. Unrealistic expectations, taking things too personally, all-or-nothing thinking, exaggeration, and overly rigid thinking are all mind traps that are dangerous to the internal stress levels of women (Kalynchuk 2004).

Other personality traits associated with stress often describe two particular types of women--perfectionists and workaholics. These traits often occur simultaneously in a woman who is unable to view situations from a clear perspective (Pettinger 2002).

Positive and Negative Aspects of Stress

Positive stress can have a positive effect on motivation and awareness. Positive stress can provide the stimulation to cope with challenging situations. Another important aspect of stress is it provides the sense of urgency and alertness needed for survival when confronting threatening situations (Pettinger 2002).

Negative stress is a contributing factor in minor conditions like headaches, digestive problems, skin complaints, insomnia and ulcer. Excessive prolonged and unrelieved stress can have a harmful effect on mental, physical and spiritual health.

This ongoing stress can be a contributing factor in some women's overall sexual functioning (Pettinger 2002).

Persistent ongoing stress causes the body to prepare for long-term protection. The body begins secreting hormones to increase blood sugar levels. This phase is common and not necessarily harmful, but it must include periods of relaxation and rest to counterbalance the stress response. Otherwise, fatigue, concentration lapses, irritability and lethargy will result (Pettinger 2002).

In chronic stress situations, sufferers enter the exhaustion phase in which emotional, physical, and mental resources no longer function, as they should. The body experiences adrenal exhaustion, which leads to, decreased stress tolerance. Long bouts of extreme stress can lead to progressive mental and physical exhaustion, illness, and collapse (Pettinger 2002). Women who are undergoing such stress often do not have the emotional or mental reserves to engage in sexual relations.

Physical symptoms of stress include loss of sexual drive, sleep pattern changes, fatigue, digestion changes, headaches, aches and pains, infections, indigestion, dizziness, fainting, sweating, trembling, tingling hands and feet, breathlessness, palpitations, and missed heartbeats (Pettinger 2002).

Emotional symptoms of stress include bouts of depression, impatience, fits of rage, tearfulness, and deterioration of personal hygiene and appearance (Elkin 1999).

Stress and Sexual Functioning

The correlation between stress and sexual functioning in women is an area that requires knowledge of both the bodily stress response and the bodily sexual response. The literature that has been reviewed is a combination of current research in both of these fields.

Women of different races may react differently to stress. Researchers have found that estrogen levels appear to play a different role during stress in black and white women, a difference that may help explain the higher cardiovascular disease rates in blacks (Harshfield 2006).

Exposing the subjects to common stressful situations, the researchers found that estrogen levels dropped during stress in healthy black girls, but remained consistent in healthy white girls, as explained by Dr. Gregory Harshfield, of the Medical College of Georgia's Georgia Prevention Institute (2006). Harshfield's work

was presented at the Annual International Interdisciplinary Conference on Hypertension.

Estrogen, which can dilate blood vessels, is considered beneficial in stressful situations. "If you lose that protection during periods of stress in the day it may contribute to the early development of heart disease we typically see in black women," explained Harshfield (2006). The researchers found the greatest changes in blood pressure response in black girls. Blood samples taken before, during, and one hour after playing a competitive video game showed their estrogen levels dropped during stress and went back up afterward.

"Conventional thinking tells us estrogen is not normally a major player in regulating blood pressure during stress," said Harshfield (2006). "This tells us sex hormones do play a role in regulating blood pressure but, unfortunately, it's a bad one in black females" (Harshfield 2006)

"We are now thinking that when black girls are under stress, they are losing all the protective effects of estrogen," Harshfield explained (2006). "In whites under stress, their estrogen levels are consistent. They are blocking angiotensin in the sympathetic nervous system so the stress is not affecting them as much" (Harshfield 2006). He added that the prevalence of hypertension is increasing in females,

particularly in black females. Their overall death rate from hypertension is more than twice that of white females.

According to Harshfield, little is known about the mechanisms underlying racial differences in blood pressure. His previous work has shown that, compared to their white peers, healthy black girls and boys have reduced ability to secrete sodium following stress, which leaves their blood pressure elevated for longer periods. "Estrogen is probably another mechanism through which the blood pressure is staying elevated," he concluded (Harshfield 2006).

While the research is still ongoing, some answers are coming from scientists such as those at Dalhousie University in Nova Scotia, who have found that rats repeatedly exposed to the stress hormone corticosterone show more depression-like behavior and greater signs of anxiety. Their study, which offers a rare look at sex differences, also indicates that the stress hormone affects males more than females. The findings appear in the December issue of Behavioral Neuroscience (Kalynchuk 2004).

In the study, a team of four led by Lisa Kalynchuk, Ph.D., now at the University of Saskatchewan, studied 30 male rats and 30 female rats. By studying links between repeated stress and the depression-like behavior and the function of

the hippocampus in rats, the investigators were hunting for clues about the biological causes of depression in humans (Kalynchuk 2004).

Kalynchuk and her co-authors cite medical evidence that depression can stem from chronic overstimulation of the body's hypothalamic-pituitary-adrenal axis, which produces stress hormones such as cortisol in humans and corticosterone in rats. For example, patients with Cushing's disease have high levels of cortisol and are often depressed, and depressed people often have hippocampus-linked cognitive problems, due perhaps to smaller hippocampi (Kalynchuk 2004).

Thus, after the researchers injected rats with high levels of stress hormone for three weeks, they found that compared with controls, the animals showed significantly more behaviors that could be considered anxious and depressed. As a result, the biological agent was unmasked (Kalynchuk 2004).

Kalynchuk and her colleagues tried a new approach to control variations in hormone levels between subjects. They bypassed that system and directly injected CORT for 21 days to control its levels. Each treated rat got the same supplemental dose of stress hormone to simulate, in a controlled fashion, what prolonged stress might do to the body. The researchers injected the control groups--half of each sex group--with salt water alone (Kalynchuk 2004).

After three weeks of treatment, Kalynchuk and her colleagues monitored the rats for signs of anxiety and depression. The tests included: (1) Open field--Do rats venture out into an unfamiliar open field to explore or do they hold back? Holding back is a sign of depression (Kalynchuk 2004). (2) Resistance to capture--How much do the rats fight being picked up? Not fighting is a sign of depression. (3) Forced swim--When placed in a tank of water for 10 minutes, how much time do rats spend struggling, swimming or being immobile? Giving up is a sign of depression. (4) Predator odor--Do they seem upset or run away when a collar that has been worn by a cat gets put in their cage? Showing such defensive behaviors is a sign of depression (Kalynchuk 2004).

As postulated, the repeated cortisone injections--which simulated three weeks of chronic stress response--increased depression-like behavior in the rats. In the forced-swim test, both male and female hormone-injected rats spent more time immobile, and they became immobile faster. In the predator-odor test, the artificially stressed rats showed more of one subset of defensive behaviors when in the presence of a cat collar (Kalynchuk 2004).

The research team drew three main conclusions. First, exposure to repeated CORT injections produced depression-like behavior. Second, the hormonally stressed rats showed more anxiety in specific situations, such as the predator odor

test, which the researchers think might be especially sensitive to anxiety in rats. Third, although the effects were generally similar in male and female rats, the hormone appeared to affect males more strongly than females on these tasks (Kalynchuk 2004).

Given the greater vulnerability to stress of male rats in their study, the authors wonder whether the females' higher levels of circulating sex hormones, such as estrogen and progesterone, are "neuroprotective," supporting healthier nerve-cell life. Prior research has linked higher sex hormones to less depression-like behavior in female rats. The inclusion of stress hormone makes this study different and an advance over previous studies (Bruce McEwen, Ph.D.).

Although noting the limits of generalizing their rat findings, author Kalynchuk says new experiments could show why female rats seem more resistant to stress-induced depression than do female humans. One explanation could be that rats and humans are too different and, as she puts it, "The increased depression rate in female humans is due to an interaction between biological and psychosocial factors, which we simply cannot model in rats" (Kalynchuk 2004).

However, Kalynchuk also points to a possible hormonal explanation for which there is some support. It could be that, in humans, normal levels of female sex

hormones could help protect against depression, but hormone fluctuations could put women at risk for problems such as postpartum depression and premenstrual dysphoric disorder (Kalynchuk 2004). In the Dalhousie experiment, the female rats had normal levels of gonadal hormones. But, says Kalynchuk, other researchers have shown that female rats without ovaries--who have low levels of these hormones--are much more susceptible to stress (Kalynchuk 2004).

Having confirmed that the hormones released by chronic stress cause depression, researchers want to pin down the mechanism: Exactly how does CORT make us feel blue? Minor of UCLA says the study has bearing on the debate over whether CORT facilitates neurodegeneration or results in neuroprotection to produce behavioral depression.

On the one hand, Kalynchuk cites evidence that repeated stress in lab animals reduces neurogenesis--the birth of new brain cells--in the hippocampus, leading to depressive symptoms. It is not clear whether a decrease in neurogenesis can cause depression or is a by-product of depression (Kalynchuk 2004). A direct link has not yet been made.

Minor postulates that chronic stress hormone trips a neurological circuit breaker by causing receptors in the hippocampus and amygdala to block glucose

intake, sparing these regions from neurotoxic over excitement. This long-term coping response, he says, would drag down other responses and behaviors, causing what people experience as depression (Kalynchuk 2004).

"Stress occurs when a person is anxious and fatigued," says Minor. Anxiety causes energy production, but fatigue causes energy depletion in a compensatory shift. He cites accumulating evidence of depression as a metabolic problem in the brain--a view that, if confirmed, would promote regimens that help the brain build new neurons. Such regimens include a change of scenery, fresh air, exercise, and regular sleep (Pettinger 2002).

In some depressed patients, the hypothalamic-pituitary-adrenal axis looks like it is being dysregulated (Kalynchuk 2004). Minor notes that restoring balance to a stressed-out system--and re-regulating glucose transport to the brain--could help. Minor and his colleagues are preparing to test this hypothesis in a study of depressed people.

Ronald Duman, Ph.D., a professor of psychiatry and pharmacology at the Yale University School of Medicine, also hopes to broaden Kalynchuk's findings to improve treatment. The forced-swim test is, he notes, typically used to test antidepressants on rats, but their recovery is paced differently from humans. If

someone could replicate the new findings with other indicators of depression, says Duman, it could lead to a better model for testing new drugs and other therapies (Dow 2005). Current research continues to expand on issues such as these that are important to women in today's world.

Review of Literature

As described earlier, sexual research can be traced back many decades. The literature has identified that when Alfred Kinsey and his colleagues first published their research on *The Sexual Behavior in the Human Male* (1948), that report presented a challenge to the scientific world. Many wondered if Kinsey's finds were indeed true.

Kinsey's research was concentrated in the Midwest and, therefore, made the results even more shocking to America and the world. His statistics showed that 70% of males who lived on farms had engaged in some form of bestiality. The titillating nature of this and other facts caught the nation's attention. 83% of the males surveyed had experimented sexually before marriage, and 50% of the women. Out of the married men and women surveyed, 50% of the men had been involved in at least one extramarital sexual relationship compared to 25% of the women.

Masturbation was another area studied by Kinsey. In his report, 92% of the men surveyed responded that they had masturbated and 62% of women. Questions about homosexuality provided more shocking statistics. 37% of males and 13% of females had had at least one homosexual experience after puberty that resulted in orgasm.

Kinsey's research was revolutionary in that it concentrated on the frequency and types of sexual behavior that white, middle class, young Americans were participating in. Kinsey's team conducted over 17,000 personal interviews using an average of 300 per person.

Kinsey's main research objective was to get a baseline of information about the sexual behaviors of individuals. The research did not go in depth about understanding the physical nature of sexual desires or even the sexual processes of men and women. Kinsey's research was a large-scale study for the purpose of understanding the current sexual activities for people of the United States. However, it soon became a springboard for other sexual activities and functioning studies.

Masters and Johnson (1966) were more interested in studying the structure, psychology, and physiology of Americans' sexual behavior. They developed

a thorough way of observing and measuring masturbation and sexual intercourse in the laboratory.

Their research was among the first to actually record the physiological data from the human body during sexual excitation. Masters and Johnson were able to frame the results of their research in language that made sex a healthy, natural activity instead of a forbidden act that should not be talked about.

The basis of Masters and Johnson's research was a four-stage model of sexual response. They called this staged model the "human sexual response cycle." The four stages of the human sexual response cycle are: the excitement phase, the plateau phase, the orgasmic phase, and the resolution phase (Masters, W., and V. Johnson. 1970).

The excitement phase, also referred to as the arousal phase, is the first stage of the human sexual response cycle. This phase begins with mental stimulation and erotic physical contact. This is the phase that is the most difficult for women who are stressed and overworked. If her partner cannot physically arouse a woman, the sexual act is not going to be enjoyable (Lief, 1981).

When a person is at full arousal, he or she is considered to be in the plateau phase. The person has not yet reached orgasm but their circulation and heart rate are

increasing. This second phase of the sexual cycle is when sexual pleasure rises and muscle tension also continues to increase (Masters, W., and V. Johnson. 1970).

The conclusion of the plateau phase leads into the third phase in the human sexual response cycle. The orgasmic phase occurs when both males and females experience quick cycles of muscle contractions of the anus and lower pelvic muscles, approximately 0.8 seconds apart. Women also experience uterine and vaginal contractions during this phase (Masters, W., and V. Johnson. 1970).

After the orgasmic phase, the body goes through a resolution phase. Masters and Johnson described this as the time when the muscles in the body relax and blood pressure drops. The resolution phase is often associated with a tired feeling, since endorphins are leaving the body, and the body is trying to adjust (Masters, W., and V. Johnson. 1970).

Masters and Johnson also studied sexual dysfunction. Their 1970 book entitled *Human Sexual Inadequacy* delved deep into sexual dysfunction's facing both males and females. Their clinical approach to the treatment of sexual problems described in this book revolutionized couples' sex therapy.

After the introduction of Masters and Johnson's rapid two-week treatment program, individualized multi-year psychotherapy and psychoanalysis were no

longer the only treatment options for couples suffering from sexual dysfunction. Couples could complete the two-week program together instead of individually, and success rates were reported to be higher than 80%. Couples worked through a talk therapy program with a male and female therapist team.

Emotions and Sexuality in Women

Women often are not able to fully participate in a sexual act unless they feel an intimate bond with their partner. Similarly, if their life stressors are overwhelming them, they may not have the energy necessary to elicit the sexual response their partner and them selves desire (Masters, W., and V. Johnson. 1970).

Sevely (1987) and Shifren (2004) concentrated their research on the physical functioning of the body during sexual stimulation and excitement. Their main goal was to establish and define the excitement process through the research of both male and female sexual functioning. Sevely's 1987 book was the culmination of a seven-year study that revolutionized the way people looked at human sexuality. The study uncovered similarities between male and female sexual organs and their sexual responses. Sevely also looked at how outside stressors impact both the male and female sex drive.

Research has also been conducted on how past problems in a woman's life can lead to sexual dysfunction in her current life. Davis (1929) researched the sex lives of twenty-two hundred women. Over a period of years, from 1920 to 1929, Davis found that many women suffering from sexual dysfunction as adults had also experienced rape or molestation as a younger women or children.

Davis's study was designed to extensively survey the sex lives of "normal" women during the 1920's. The results of her study indicated that 50 percent of single women had been involved in some degree of homosexual relationship, and 30 percent of married women reported having been involved in a homosexual experience.

The journal *Headache* reports that contrary to the cliché: "Not tonight, I have a headache," migraine sufferers in fact have higher levels of sexual desire. The researchers, from Wake Forest University School of Medicine, concluded that sexual desire and migraine headaches may be influenced by the same brain chemical.

"The results support the idea that migraine, as a syndrome, is associated with other common phenomena. Understanding this link will help us to better understand

the nature of migraine and perhaps lead to improved treatment," said researcher Timothy Houle (2006).

The researchers examined the relationship between migraine headache and self-reported sexual desire and found evidence of a complex relationship between the two. Both sexual desire and migraine headache have been linked to levels of serotonin, a brain chemical that also plays a role in depression.

An excess of serotonin may be associated with decreased libido, and migraine sufferers are reported to have low levels of the brain chemical. "Considering the circumstantial evidence linking both migraine and sexual desire to serotonin, we wanted to explore whether the two phenomena are actually related," said Houle (2006).

Because high levels of serotonin are associated with low sexual desire, and migraine sufferers have low levels of the chemical, it was predicted that they would report higher levels of sex drive.

The study found that migraine sufferers did report levels of sexual desire that were 20 percent higher than those suffering from other headaches. "The study demonstrated that migraine patients in general may experience higher levels of sexual desire than others," said Houle. "They appeared to be aware of this, rating

their sex drive as being higher than others their age and gender" (Houle 2006). He added that the results suggest that a serotonin link may be implicated in both migraine headaches and sexual desire.

Eleanor Hamilton published *Emotions and Sexuality in the Woman* (Otto, 1971) to help researchers understand the emotional aspects of female sexuality. Hamilton discusses the cultural influences that drive women and often deprive them of their best sexual experiences.

Hamilton gives great insight into the emotional differences between the man and the woman. She discusses how women are auditory and men more visual. She discusses how many women face a cyclical nature of sexual desires (Otto, 1971), being wildly sexual during part of the month, while at other times being disinterested in sex. This is often just as bothersome to them as it is to their partners.

The reverse can also be true. A woman ready to have sex at any time of the month, can be distressed beyond measure by a mate who wants sex only once or twice a month (Otto, 1971).

Other sexual difficulties that can arise between a man and a woman were also discussed in Otto's book:

> "Another cause of difficulty is a rigid attitude toward what is permissible or proper in the process of lovemaking. A small woman felt overwhelmed during intercourse with her two-hundred-pound husband above her, but he felt that that was the only right way and could not reach orgasm with her above him. Such an attitude demonstrates quite vividly the influence of emotion on sexuality. Primitive peoples have laughed at the man-above position as the missionary position. The big man's difficulty had nothing to do with anatomy or physiology. Variety is the spice of life and, as Disraeli said, the mother of enjoyment. Emotional fixations of any kind that limit one's ability to experiment will lessen one's ultimate pleasure and satisfaction". (Otto 1971, 51).

A fixation or distraction of any kind could lead to sexual functioning problems in one or both of the individuals. Women today may hold on to sexual stereotypes that are inhibiting their functioning. They may have beliefs about sex that were formed at a young age and are now being challenged in their intimate relationships (Otto, 1971).

Another important point discussed by Hamilton, in Otto's book, concerns a woman's belief that her spouse or partner does not instinctively know her needs (Otto, 1971). Many females make an irrational assumption that the man who loves them ought to know her sexual needs, to anticipate them in every detail, and that she ought never to have to verbalize these to him. A man's usual reaction to such an assumption is to protest that he is not a mind reader (Otto, 1971).

Body Image and Sexual Responding

A Penn State survey of women aged between 35 and 55 has found that the cultural emphasis on being young and thin has a more significant influence on sexual functioning than menopause (Koch, 2006).

The findings seem to contradict the beliefs of pharmaceutical companies who are planning libido enhancers for menopausal women. Instead, the survey showed that women may not need those drugs at all (Koch, 2006).

The success of Viagra for men has created a heightened interest in marketing hormones and other medications to midlife women to insure sexual functioning and satisfaction (Koch, 2006). The results suggest that 'treatment,' via medication, of menopausal effects for this purpose seems unwarranted in light of the findings that menopausal status did not have a significant impact on the sexual responding of the women in this study (Koch, 2006).

The research question that emerges is: if menopause is not the big contributor to low sexual response, what is? There has been a dearth of research examining the relationship between body image and women's sexual response. These new results support a link between body image and sexual responding that needs further study.

Koch's study, appearing in the May 2006 issue of *The Journal of Sex Research*, surveyed heterosexual Caucasian women of whom 21 percent said they were pre-menopausal, 63 percent said they were undergoing some menopausal changes (perimenopausal), and 16 percent were post-menopausal (Koch, 2006).

The results showed that, regardless of the woman's age or menopausal status, she was more likely to consider herself more attractive when she was 10 years younger. Nearly 21 percent of the respondents could not think of even one attractive feature and reported an overall sense of dissatisfaction with their bodies (Koch, 2006). The survey participants were most dissatisfied with their stomach, hips, thighs and legs--the parts of the body that gain weight with age. The researchers contend that the western world's infatuation with youthful, slender bodies creates anxiety about aging and pressure for older women to disguise what are otherwise normal changes (Koch, 2006).

Most interestingly, the more a woman perceived herself as less attractive, the more likely she was to report a decline in sexual desire or activity. Nearly 70 percent of the women reported one or more changes in their sexual response, usually desiring sex less and engaging in sex less often. Encouragingly, despite these changes in desire, the women reported that when they did have sex, there was a high level of enjoyment (Koch, 2006).

Women and Orgasm

A very common problem for women is their desire to learn to come to orgasm. Barbach discussed how the female sexual experience was relatively unknown until recently:

> "Until recently, it really was not known exactly what women experienced sexually. Most of what was believed came from writings by men about women's experiences. If what was described in the sex manuals did not match a woman's own personal experiences, she assumed they described the experience of most other women, And the mythical experiences described in such books made many women feel inadequate, abnormal. A woman may have secretly hoped that her responses would some day match up with those detailed in the books. The fact that friends rarely discussed sexual problems frankly only confirmed a woman's fears that she was one of the few people having any difficulty in this area. There was almost no information on the subject from a woman's point of view". (Barbach 1976, 2).

For most women the reality they were living with and the myth that they learned about in books did not match up. Women were told that if they loved a man, orgasm would come easily. But many women were in love and still unable to get the pleasure of an orgasm. It soon became clear that more research and more information were required for A woman to totally understand her body and its functions (Kaplan 1979).

The first thing a woman must learn are the facts of stimulus-response (Jones, 1972). Many women and their partners may be having difficulty because of confusion about the actual stimulus-response that is necessary for a woman to achieve orgasm. The continued lack of orgasm can then lead to stress, which further contributes to sexual dysfunction in a couple.

Sexual arousal consists of more than just physical genital stimulation. Genital stimulation is usually necessary for producing a satisfying and orgasmic sexual experience, but stimulation may not produce an orgasm if desire is absent or if the female's attention is elsewhere (Jones, 1972).

If a woman's mind is focused on sexual sensations, her body can enjoy it more fully. Outside distractions, anxiety, anger, and stress operate to divert attention from the sexual pleasures and can end up diluting the sexual experience (Jones, 1972).

If a woman is angry with her partner and does not want to have an orgasm, or if she is afraid or uncomfortable in the sexual situation, she will not reach orgasm. If she is tired from a long hard day of work or has been stressed for a long period of time, it may be difficult to get distracting thoughts out of her mind, even if she truly desires her partner (Jones, 1972).

Kinsey (1953), Kaplan (1974), and Fisher (1973) all refer to distractions, fatigue, and preoccupation as being the most pervasive barriers to a woman's enjoyment of a satisfactory sexual experience (Kinsey, 1953). It is important to be aware of the role of distraction because one partner may unwittingly introduce stimuli which neither person may recognize as being a source of distraction (Kaplan, 1974).

Interruptions in lovemaking for a sip of wine can lower a woman's level of general arousal. Even turning on some music to help with the relaxation can provide a distraction and prevent the attainment of orgasm. If a woman knows she is susceptible to distractions, she can fill the room with white noise or experiment with other ways to prevent her mind from wondering during intercourse (Fisher, 1973).

Reinisch (1990) was the author of *The Kinsey Institute New Report on Sex: What You Must Know to Be Sexually Literate*. Reinisch's book is a comprehensive look at the Kinsey Institute, sex, and sexuality. Much of this book is organized in a question and answer format, listing various sexual and body questions that people have contacted the Kinsey Institute about. In this report, Reinisch reiterates questions on all types of sexuality issues including anatomy, body image, self-esteem, love, attraction, and orgasms (Reinisch, 1990).

Desire and body image are often thought to go hand in hand but in *Sexy Matters for Women* (Foley, Kope, Sugrue 2002) they had a different point of view on body image, weight, and sexuality.

> 'She's let herself go,' we overheard one co-worker say to another, chatting as they waited for the coffee to finish brewing. There are multiple levels of meaning in that statement. Where is she going, or where has she gone? One possible answer is that she is going her own way. If she is going on her own, what's the problem? If we listen to the voices of some of the feminist spokeswomen, we hear that added inches aren't the problem but the refusal to get in lockstep with the national preoccupations with 'the body impossible.' What other explanation could there be for why a woman's body is not hers alone but is co-owned by the family, society, and the culture she lives in? Do we want her sexually satisfied and comfortable with herself? Satisfaction doesn't sell anything, and comfort and self-assurance can be threatening to others who don't feel that way. As absurd as it is to have an entire faction of society willingly gripping the short leash of body obsession, such is the status quo with which we are all familiar (Foley, Kope, Sugrue 2002, 137).

Dr. Meston recently discussed the female orgasmic disorder in a University of Texas article (Meston, 2006). Female Orgasmic Disorder (FOD) is defined by the DSM-IV as a persistent or recurrent delay in, or absence of, orgasm following a normal sexual excitement phase. A diagnosis of Female Orgasmic Disorder would not be made if this inability to obtain orgasm does not lead to sexual distress or dissatisfaction. Only when the lack of orgasm causes interpersonal difficulty and stress is the diagnosis assigned (Meston, 2006).

The diagnosis of Female Orgasmic Disorder should be based on the woman's orgasmic capacity being less than would be reasonably expected for a woman of her age and experience. Women exhibit a large difference in the type and intensity of stimulation required to attain orgasm. Research indicates that orgasms in women can be induced via erotic stimulation of a number of genital sites including the clitoris and vagina, the periurethral glans, breast/nipple or mons (Meston, 2006).

Non-genital forms of stimulation reported to induce orgasm include mental-imagery or fantasy and hypnosis. There have also been a few isolated cases of spontaneous orgasm described in the psychiatric literature where no obvious sexual stimulus can be ascertained.

Based on findings from the National Health and Social Life Survey (NHSLS), orgasmic problems are the second most frequently reported sexual problem in US women. Results from this random sample of 1,749 US women (ages 18-59) indicated that 24% reported a lack of orgasm in the past year for at least several months or more (National, 2006). This sample also suggests that non-married women are at a greater risk for developing orgasm problems, as well as women who have not graduated from college.

Treatment of female orgasmic disorder can be done through psychoanalysis, cognitive-behavioral therapy, pharmacological drugs, and systems theory perspectives. Regardless of the treatment approach used, one needs to keep in mind that relationship factors such as marital satisfaction, marital adjustment, personal happiness, and personal stability have been linked to orgasm consistency, quality, and satisfaction in women. A relation between childhood sexual abuse and various sexual difficulties has also been reported (Meston, 2006).

Sexual Functioning

In *For Yourself: The Fulfillment of Female Sexuality*, Barbach (1976) discusses some of the stereotypes and misconceptions that are laid upon women regarding sex and sexuality. Women are often left to fight off years of mental images that they have accumulated about how a woman should look and behave. They are required to act a certain way during sexual experiences and a different way in their everyday life. Women have had to deny their sexual urges and put off their own pleasure for their partners (Barbach, 1976).

> "One of the most detrimental of the erroneous beliefs is that sex is not as necessary for women as it is for men. Women are taught that a woman does not need the sexual release that a man does, that a man's sexual needs are greater than a woman's and she must accommodate to his needs. This can produce an unfortunate situation at either extreme. If a woman feels she has no rights of her own, but must accommodate her partner whenever he is

> sexually interested, she will very likely end up feeling resentful most of the time. Constant sexual availability is not part of the marriage vows. On the other hand, if a woman believes she is not supposed to express herself sexually, she may inhibit her natural desire for fear she will appear unfeminine" (Barbach 1976, 10).

This information is important for researchers to understand, but has not yet been incorporated into current sexual functioning research. Barbach shows an understanding that the overall sexual functioning of a woman is not solely based on physical stimulation, and the female needs to feel the desire to be sexual in order to truly receive pleasure from the sexual experience (Barbach, 1976).

Barbach also describes some of the reasons that a woman may not like to engage in sexual acts, which include past unwanted sexual fondling, traumas, or beliefs. Some women feared they would lose control during an orgasm and did not want to repulse their partners. Other women believed their genital area was an unclean place and did not want their partner going near. Most sexual repulsion was linked to child sexual trauma. Barbach reports that in 1972 over nine percent of females reported having sexual contact with a relative (Barbach, 1976).

A woman's ability to function sexually is dependent on more than just her willingness to lose control during an orgasm. Women and men have a variety of bodily activities that contribute to their ability to function sexually. Reinsch (1990)

analyzed the Kinsey Institute in *New Report on Sex*. In Reinsch's book the physical, psychological, and social factors were referenced as having an important part in the sexual functioning of adult men and women (Reinsch, 1990).

Reinsch (p171) lists the following factors as having an affect on a person's ability to function sexually: hormonal events that occur before a person is born, childhood interactions, encoding as we first begin to experience sexual arousal, adolescence interactions with peers, how a person feels about his or her body, past recollections of sexual activities, physical health, and emotional health (Reinsch, 1990).

In 1988, Miller looked at the male and female sexuality during pregnancy. This look at the sexual functioning of women during pregnancy concentrated on the physiological reaction the pregnant body was going through. The researchers looked at the attitudes and behaviors of men and women during this quickly changing time in their lives. The women's hormones and physical changes were noted as their sex drives increased or decreased (Miller, 1998).

Pape (1982) was also very interested in studying the woman's sexual experience during pregnancy. Pape studied how the female's body and the fluctuations in hormones during pregnancy were correlated.

Long before Miller or Pape began their research on pregnancy and sexuality, James Semmens (1971) looked at nausea, vomiting, and weight gain and how they affected the sexual functioning of the pregnant woman. Semmens did take the time to look at a few of the outside stressors affecting the women that he studied. He looked at the lifestyle the women were leading and if they worked outside of the home, but most researchers did not spend much time studying the outside stressors that related to the pregnant woman's life (Semmens, 1971).

Anxiety and FOD

Another important issue that has been tackled by researchers is depression and other mental disorders and how they correlate with sexual dysfunction in a woman. Stress caused from these disorders and the medications associated with them were studied by Baily in 1973. Baily studied women who were being treated for depression and had a diagnosis of being frigid. The results of Bailey's study were that mood did increase the sexual dysfunction of the women studied. The study did not show a difference between clinically depressed patients and mildly depressed patients, only that depression was related to a secondary diagnosis of sexual dysfunction (Bailey, 1973).

Ellison (2000) looked more closely at how sexual self-acceptance decreased depression and the levels of medication required to maintain a level mood. Ellison was particularly interested in how the woman looked at herself as a sexual being and how that self-acceptance transferred into her level of sexual desire (Ellison, 2000).

Cognitive-behavioral therapy for Female Orgasmic Disorder focuses on promoting changes in attitudes and sexually-relevant thoughts, decreasing anxiety, increasing the link between positive emotions and sexual behavior, and increasing orgasmic ability and satisfaction (Meston, 2006). The behavioral exercises used to induce these changes traditionally include directed masturbation, sensate focus, and systematic desensitization. Sex education, communication skills training, and Kegel exercises are also often included in cognitive-behavioral treatment programs for anorgasmia.

Directed masturbation (DM) is most frequently prescribed for women with primary anorgasmia (Meston, 2006). The successive stages of Directed Masturbation train a woman to locate and manually stimulate genital areas that bring her sexual pleasure. The process begins with a visual exploration of the body, using a mirror and educational material depicting female genital anatomy.

Following visual and manual identification of the sensitive genital areas that elicit pleasure, a woman is instructed to apply targeted manual stimulation to these regions. Training on self-stimulation is directed toward the woman achieving orgasm alone. Once she has accomplished this, her partner is incorporated into the Directed Masturbation sessions (Meston, 2006).

Women experiencing Female Orgasmic Disorder have successfully been treated using DM in myriad therapy settings, such as group, individual, couples therapy, and bibliotherapy. A number of outcome studies and case series report DM is highly successful for treating primary anorgasmia, with success rates up to 92% of women studied (Meston, 2006).

Anxiety could potentially impair orgasmic function in women by disrupting the processing of erotic cues and causing the woman to focus instead on performance related concerns, embarrassment, and/or guilt. This, in turn, could lead the woman to engage in self-monitoring during sexual activity, an experience Masters and Johnson referred to as “spectatoring”. Anxiety reduction techniques could be beneficial for helping women attain orgasm by helping them to focus on pleasurable sexual thoughts and sensations, which enhance arousal (Meston, 2006).

Systematic desensitization and sensate focus are the two most commonly used anxiety reduction techniques for treating Female Orgasmic Disorder. Deep relaxation exercises in systematic desensitization enable the woman to replace fear responses with relaxation responses. The woman and the therapist work together to identify threatening sexual situations and anxiety-provoking stimuli (Meston, 2006).

The woman's task is to alternately experience fearful and relaxed responses, resulting in a net decrease of anxiety. After the woman can successfully imagine her hierarchy of anxiety-provoking situations without anxiety, she then engages in the hierarchy of actual activities.

Sensate focus describes a learning approach designed to increase communication and awareness of sexually sensitive areas between partners (Meston, 2006). Couples practicing sensate focus are instructed to first explore their partner's nonsexual body regions without the potential for sexual activity. The couple increasingly practices sexual touching without the pressure of sexual intercourse. The sexual touching allows for a woman to eventually guide genital, manual, and penile stimulation to enhance her arousal (Meston, 2006).

The success of using anxiety reduction techniques for treating Female Orgasmic Disorder is difficult to assess because most studies have used some

combination of anxiety reduction, sexual techniques training, sex education, communication training, bibliotherapy, Kegel exercises, and/or pharmacological agents, and have not systematically evaluated the independent contributions to treatment outcome (Meston, 2006).

With this limitation in mind, across controlled studies, women have reported decreases in anxiety and increases in the frequency of sexual intercourse and sexual satisfaction with systematic desensitization, but substantial improvements in orgasmic ability have not been noted.

Education about female genital anatomy may help acquaint a woman with her body's pleasure-producing regions and consequently help alleviate orgasm difficulties. Kegel proposed that conducting exercises that strengthen the pubococcygeous muscle could facilitate orgasm by increasing vascularity to the genitals (Meston 2006).

Drugs and Hormones

To date, there are no pharmacological agents proven to be beneficial beyond placebo in enhancing orgasmic function in women with diagnosed Female Orgasmic Disorder (Meston, 2006). Placebo-controlled research is needed to examine the effectiveness of agents with demonstrated success in case studies (i.e., buproprion, granisetron, and sildenafil) on orgasmic function in women with Female Orgasmic Disorder.

Research on other hormones has been conducted to see if evidence can be found that the hormones affect the sexual functioning of the woman. Different hormone levels in women were studied and measured to see what their overall effects were.

In a 2004 study Emory research scientists found evidence that the progesterone metabolite allopregnanolone reduces the brain's response to corticotrophin-releasing factor (CRF), a peptide hormone that plays an important role in the stress response in animals (Toufexis, 2004). The finding, which was reported in the November 10, 2004 edition of the *Journal of Neuroscience*, could provide a new drug target for treating anxiety and depression in women.

In the study (2004), researchers Donna Toufexis, Michael Davis, Carrie Davis, and Alexis Hammond compared how female rats with different levels of the sex hormones, estrogen and progesterone, reacted to loud noises after injections of CRF into the brain's lateral ventricles.

CRF injections usually increase the "acoustic startle response" in this test used to gauge stress and anxiety, a phenomenon called CRF-enhanced startle. In the first experiment, the scientists compared acoustic startle responses after CRF injection in an estrogen-only group, an estrogen-plus-progesterone group and a control group that did not receive any sex hormones. All the rats lacked ovaries and the ability to produce sex hormones naturally. Acoustic startle response was unaffected in the estrogen-only group and the control group. In the estrogen-plus-progesterone group, however, CRF-enhanced startle was significantly lower than in the other groups (Toufexis 2004).

In another set of experiments, the researchers discovered that lactating female rats with naturally high levels of progesterone had markedly lower CRF-enhanced startle responses compared to virgin females with intact ovaries. "Findings from these initial experiments pointed toward the conclusion that progesterone inhibits the effect of CRF on the acoustic startle response," said Toufexis (2004).

To test this hypothesis, the researchers gave only progesterone to female rats lacking ovaries, then compared the acoustic startle response to female rats without ovaries injected with corn oil. The progesterone group displayed significantly lower CRF-enhanced startle responses. When ovariectomized females were tested with allopregnanolone alone it also reduced CRF-enhanced startle (Toufexis, 2004).

In a final experiment, the scientists compared the effects on females that received progesterone with those that received medroxy-progesterone, an artificial progestin that binds to progesterone receptors but does not metabolize into the progesterone metabolite allopregnanolone. Only natural progesterone reduced CRF-enhanced startle (Toufexis, 2004).

Previous studies have determined that allopregnanolone enhances the activity of GABA, the main inhibitory neurotransmitter in the central nervous system, at its receptors throughout the brain. This mechanism, Toufexis said, likely accounts for progesterone's blunting effect on the brain's stress system (Toufexis, 2004).

Findings from the study correlate with clinical evidence that some people suffering from depression or anxiety have low allopregnanolone levels that normalize after treatment with anti-depressant medications (Toufexis, 2004).

New drugs could potentially be developed that mimic the effect of allopregnanolone on the GABA receptor, providing a new approach for controlling mood disorders in women, said Toufexis. The next step is to determine where exactly allopregnanolone is working in the brain to reduce the effect of CRF (Toufexis, 2004).

Some women have a deeper fear that may be holding them back sexually. Their fear of becoming too sexual can manifest itself in increased weight and an unkempt outward appearance. Foley, Kope, and Sugrue addressed this issue in their book *Sexy Matters for Women*:

> ”Being overweight can also neutralize the notion of a woman’s sexuality being dangerous. An overweight wife won’t stray, won’t tempt others. Perhaps both partners are afraid of this possibility, and it gets acted out by maintaining an unhealthy, overweight body. The overweight partner fears her own loss of control should she feel thin and attractive to others. The fact that attractiveness and sexual vitality are a part of an internal process is meaningless. The theory that sexual control and discrimination are also determinations that are made from the inside, not the outside, doesn’t hold as much stock as the artificial boundary: excess weight. When this dynamic is present and unrecognized, it can be fatal to any weight management attempts. Neither partner will be able to maintain behaviors supportive of weight loss if the underlying fear is that fat is the only thing that stands in the way of the woman and her rampant sexuality” (Foley, Kope, & Sugrue 2002, 137).

Women are constantly fighting for a balance between looking and feeling good about themselves. Often this balance gets tipped and can affect other areas of their lives. Stress, body image, and self-esteem can all play a role in the sexual function or dysfunction of a woman. Sexual functioning in women has long been an issue that needed research and discussion. With every new study, book, or article women are finally able to feel justified in their emotions and physical symptoms of sexual dysfunction (Kaplan, 1979).

Findings

There is now a growing body of information available to researchers regarding the physical nature of a woman's orgasm and her ability to have orgasms. Many people like Shifren (2004), Sevely (1987), and Masters & Johnson (1966, 1970) have concentrated their research on the physical functioning of the body during sexual acts. Their main goal was to establish and define the excitement process through the research of both male and female sexual functioning.

The research of Masters and Johnson and others in these areas was well intentioned and very useful as an established base for sexual functioning research. Without their research, further sexual problem research could not have advanced as

far as it has. It was necessary to have a specific understanding of the physical functioning of individuals before more complex research could take place.

Other researchers concentrated on women's personal histories and values to study problems that were leading to sexual dysfunction. Davis (1929) researched the sex lives of over twenty-two hundred women and found that many who were suffering from sexual dysfunction as adults had experienced a rape or molestation as a younger woman or child. Researchers such as Byers (1996), Janus (1981), and Kilmann (1986) were also greatly concerned with studying the effects of her past on a woman's current sexual functioning.

The researchers that were most interested in the past hypothesized that past hurtful sexual relationships made current sexual satisfaction impossible for certain women. Many women developed physical ailments making sex un-pleasurable and even painful, because they feared the sexual experience, a self-fulfilling prophecy. They believed sexual intercourse was going to be painful, and their physical reaction prepared them for the pain. Unfortunately they were causing their own pain during intercourse.

Individuals and teams also researched other medical conditions that were caused by hormonal imbalances. Studies were conducted to show how the addition

of hormones and drugs could increase the libido of women. Bancroft (1980) looked at the role of androgens in female sexuality.

Basson and Brotto (2003) studied the sexual psychophysiology effects of sildenafil citrate in oestrogenized women. They specifically studied women with acquired genital arousal disorder and impaired orgasm. Buster (2005) and others performed a randomized trial of the testosterone patch for low sex desire in surgically menopausal women.

All of these medical conditions -- low hormones, excessive hormones, medications, and surgeries -- have been studied, as well as their relationships to a woman's sexual functioning. The results varied, but the research was significant in helping women who have sexual functioning problems due to these medical conditions. However, this research did not take into consideration the emotional stressors that women suffering from sexual dysfunction may have in their lives.

The social context of women's sexuality has been a subject of research. Researchers and physicians looking for answers to a woman's sexual dysfunction problems have gone into her past to find the answers. The researcher who is looking at the social context of women's sexual functioning or dysfunctioning is looking at how women in general are experiencing sexuality during certain periods in history.

The Kinsey Institute has conducted some of the most in-depth studies of both male and female sexuality. Kinsey (1948) wrote a study of *The Sexual Behavior in the Human Male,* looking at relationships that men formed in the sexual realm. Then, in 1953, Kinsey and his associates released their report on *The Sexual Behavior in the Human Female,* an equally comprehensive study of women relative to the location and sampling that was available to the researchers.

Other researchers were also interested in how society could affect the sexual functioning of women. Beck (1984) looked at the current conceptualization of sexual dysfunction from a psychologist's point of view.

Researchers such as Behling (2001) have conducted studies on how the masculinity of women in America during certain time periods could have affected their sexuality. Blackledge (2003), Byers (1996), Daniluk (1993), Darty (1983), Dearth (1990), Hurlbert (1991), and Weinberg (1990) spent their research trying to find out how the society around women could affect their sexual functioning. Mary Jane Sherfey, a writer on female sexuality and a psychiatrist wrote many articles on female sexuality including her essay, *A Theory on Female Sexuality* (1966), where she noted that "the strength of the sex drive determines the force required to suppress

it". Robert Latou Dickinson was the most significant figure in American sex research before Alfred Kinsey. He was strongly convinced that many difficulties his patients reported, including insomnia, menstrual irregularities, and certain types of pain, had their roots in sexual problems. (Dickinson, 1933).

Marriage, and the sexual relationship that goes with it, is another area where women's sexual functioning has been researched. These researchers wanted to study the sexual functioning of married women in depth because their long term relationships were thought to make it easier for them to be in touch with their bodies and better able to understand their ability to achieve orgasm.

Williams (1984) discussed the practical management of sexually responsive women who were married and complained of not being able to reach orgasm during intercourse. Emde (1953) was an early pioneer in the research of group therapy for marriages that had one or more partners who were having sexual functioning issues.

Renovating Marriage by Libby (1973) also took a look inside the marriage, specifically the sexual lifestyles of couples in the 1970's. For Tavris (1977), married women comprised the bulk of research for ten years. The 1977 *Redbook Report on Female Sexuality* contained information on over 100,000 married women's sexual habits.

Women in marriage situations have been a clearly defined study group for many researchers. These researchers tried to factor in the emotional and physical aspects that affect a married woman on a daily basis, but often the research fell short of totally understanding the stresses that women go through on a regular basis.

Motherhood and pregnancy were another area of research relative to a woman's sexual functioning. Some researchers looked at the sexual functioning of women during pregnancy while others concentrated on the after effects of the pregnancy. Miller (1988) looked at both male and female sexuality during pregnancy. She studied the attitudes and behaviors of men and women during this tumultuous time in their lives.

Pape (1982) concentrated on the female's sexual experience during pregnancy, specifically discussing how the female's body reacts to the fluctuations in hormones during this time period. Semmens took a more psychosocial approach to studying the sexuality of pregnancy and women. He looked at how weight gain, nausea, and vomiting during pregnancy affected the overall sexual functions of the pregnant woman.

When researching pregnancy and female sexual functioning, these researchers concentrated on the physiological reactions the pregnant body was

experiencing. Seemens also looked at the emotional aspects of the woman adjusting to her changing body. However, none of the above researchers spent much time studying the outside stressors being incorporated into the pregnant woman's life.

Depression and other mental disorders were often referenced as having a correlation to sexual dysfunction in a woman. Bailey (1973) conducted a study of women that had been labeled as frigid and were being treated for depression. The results were that a depressed mood, even if not clinically depressed, did increase the sexual dysfunctions of women. Other researchers, like Ellison (2000), discussed the role of depression and medications on the sexual desires of women.

Quality of Published Work

The quality of published work was not a factor in this literature review. There have been many research studies conducted in the field of female sexual functioning. However, the quantity of research that specifically looked at how stress affects the overall functioning of a woman was very inadequate.

Several research studies were multi-year studies that were conducted under strict supervision. These studies addressed a specific question and diligently followed protocol for obtaining research information. Although none of these studies solely discussed how stress affects the overall functioning of women, the studies were well designed to answer their intended questions. These areas of research were a useful starting point for more specific studies that occurred later as well as future studies that may be performed.

Small-scale studies and articles were also very useful in this literature review. These publications offered a variety of viewpoints concerning women and their sexuality as well as insights into causes of sexual dysfunction problems. Unfortunately many of these informative articles did not specifically cite the source of their information or their statistics and therefore were not as useful as they could have been. These studies, articles and popular magazines are still a very useful source for women who are trying to find answers to their sexual problems.

There was also an abundance of popular non-fiction titles that offered interesting and informative information for women on their sexual health. Very few offered ideas for how stress was affecting the overall sexual functioning of women, and there were no titles found that specifically concentrated on the negative aspects of stress on the sexual lives of women.

Conclusions

Although there is a significant amount of research in the field of female sexual functioning, most research addresses the physiological factors that inhibit a woman's proper sexual functioning. When researchers were able to account for stressors in the women's lives, it was as a secondary factor to the physiological factors that were impeding them sexually.

All of the research included in this literature review offers significant information on female sexuality. It is especially important to acknowledge the works of early researchers in this field. Now that the initial research has been conducted, it is important to continue exploring female sexuality and sexual functioning.

Women need more information on their physiological issues relating to sex as well as in-depth studies to help cure sexual functioning problems. Women want to be seen as sexual beings just as men are. Women want to receive the same level of care for their sexual dysfunctions as men are receiving.

Many women have suffered in silence for years because sexual problems were not something that a woman could talk about. Now women feel more open about their sexual issues but still are not able to feel as if their issues are treated on an equal level as male sexual functioning issues.

It is important for people to understand how sexual dysfunctions can affect all aspects of a woman's life. Women who are experiencing great emotional turmoil because of their sexual problems are often categorized as having mental health issues instead of sexual dysfunction issues. This is a double standard when compared to emotional turmoil that men admit to having when erectile dysfunction is part of their lives.

Stress and the overall sexual functioning of women were not properly discussed in any of the research surveyed for this literature review. It appears that no such all-inclusive research is currently available. Although many researchers were able to touch on stress as a possible factor in the sexual functioning of women, there was no definitive research in this area.

Further Research

Stress and how it affects the overall sexual functioning of women is an important research question that needs to be studied further. Women are suffering from sexual dysfunction problems that are caused by their emotional and physical reactions to the stressors in their lives.

Researchers need to incorporate real-life situations into their studies so that there may be a better understanding of how stress affects the sexual functioning of

women today. *Women* are becoming more and more stressed in the 21st century. Women are now working outside the home more than ever before, while also trying to take care of children and spouses on the home front.

Further research should take a serious look at how the ongoing psychological stressors in women's lives can affect their physiological reactions. Many women may not even realize the physiological toll that stress is taking on their bodies and their bodies' sexual functioning. It is also suggested that a broad spectrum of women be studied, not just married women or women with families. Women of all ages and sexual styles are experiencing stress and should have the opportunity to receive relief from their sexual dysfunctions.

Another area that has not been adequately explored is the lesbian population. Lesbian or bisexual women have specific stressors in their lives that cannot be fully realized by studying heterosexual women. It is important for further research to incorporate women living both heterosexual and homosexual lifestyles.

Further researchers should be specific in their focus and narrow the goal of their research to a small-defined specialty area. There are currently many research

reports on sexual functioning in general. What women need is specific research done on the important issue pertaining to them such as stress, body image, and self-esteem.

It is important for future research to take into account current societal trends. Most women are not able to stay at home with their families and are instead working full-time jobs. More women then ever before are single parents with distinct issues separate from the sexual functioning issues of married women. Researchers should take care to incorporate specific studies that will involve women from different lifestyles.

It will also be important for further research to include women of many different ethnic backgrounds and cultures. Cultural diversity has been weak in the studies conducted in recent years, as well as initial sexual studies conducted earlier in the twentieth century. Further studies should make their results as diverse as possible to encompass the reality for women of many races and ethnic backgrounds.

The area of female sexual functioning is a broad research field that still has many specific subjects that need to be explored. The effects of stress on the overall sexual functioning of women is one of the key areas of female sexual functioning that calls out for further research.

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