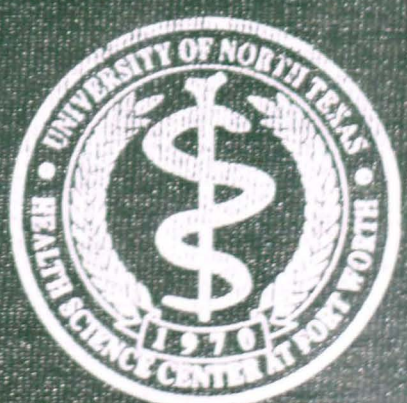
UNIVERSITY OF NORTH TEXAS
HEALTH SCIENCE CENTER AT FORT WORTH
1970

Oden, Melissa Stanford, Women & Stress: Investigating the Female Stress Syndrome. Master of Public Health (Community Health), May 2006, 47 pp., bibliography. Research indicates that women experience long-term effects of stress that appear to be not only different from, but possibly more harmful than the long-term effects of stress in men. This situation creates the possibility of more chronic illness for women, as well as the possibility for higher mortality rates. The purpose of this project is to investigate the effects of stress on professional women in Tarrant County based on meanings and interpretations women give to the stress they experience. It will also provide additional information about the effects of Female Stress Syndrome to contribute to the research literature on this topic.

WOMEN & STRESS:
INVESTIGATING THE FEMALE STRESS SYNDROME

Melissa Stanford Oden, LMSW, CLNH

APPROVED:

Major Professor

Committee Member

Committee Member

Department Chair

Dean, School of Public Health

WOMEN AND STRESS:

INVESTIGATING THE FEMALE STRESS SYNDROME

THESIS

Presented to the School of Public Health

University of North Texas
Health Science Center at Fort Worth

in Partial Fulfillment of the Requirements

for the degree of

Master of Public Health

By

Melissa Stanford Oden, LMSW, CLNH

Fort Worth, Texas

May 2006

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION TO THE STUDY

Purpose of Study

Research indicates that women experience long-term effects of stress that appear to be not only different from, but possibly more harmful than the long-term effects of stress in men (Braiker, 1986, p. 13). This situation creates the possibility of more chronic illness for women, as well as the possibility for higher morality rates. The purpose of this study is to examine the self-reported effects of stress in professional women in Tarrant County and to compare those results to the literature. This occupational group of women was selected for study because the literature discusses the Female Stress Syndrome in the context of the life of the professional woman, therefore it was decided to focus on this particular group of women for this study.

Background and Significance

Stressful living and hurried lifestyles seem to have become the norm in American society. Research has proven that long-term stress can have a negative effect on health. The Centers for Disease Control reports that 75 - 90 percent of Primary Care Physician visits are stress-related (Bost, 2005, p. 13).

The list of reported illnesses that either primarily result from or are aggravated by stress includes heart disease, stroke, diabetes, high blood pressure, ulcers, irritable bowel syndrome, infertility, headaches (particularly migraines), and depression (Bost, 2005). Women report these symptoms more often than men. This does not mean that men do not experience stress. Recent research is beginning to show, however, that the negative effects of long-term stress on women are different and, quite possibly, more harmful than in men. Women have a unique physiology that makes them particularly vulnerable to the effects of long-term stress. The "Female Stress Syndrome" is the diagnosis given to women who suffer from multiple physical, mental and emotional symptoms of long-term stress (Cherewatenko, 2003, p. 13).

Generally speaking, stress can be defined physiologically as an internal response to an external stimulus (Bost, 2005, p. 14). When compared with the diagnosis of "Female Stress Syndrome", this appears to be an oversimplified definition of stress, particularly for women. There is a growing body of evidence that shows that effects of stress may, indeed, be more pronounced in women than in men. According to the National Institute of Child Health and Human Development and the University of Michigan, studies have shown that estrogen may increase cortisol production and actually decrease the ability of cortisol to shut itself off, resulting in a stress response that is not only more intense and pronounced, but longer-lasting in women than the stress response in men (Cherewatenko, 2003, p. 33). Additionally, a 1994 U.S. Department of Labor survey of 250,000 working women revealed that sixty percent of these women reported that their number one problem was stress (Domar, 1996, p. 8).

This growing body of evidence appears to be emphasizing the seriousness of the stress response in women, especially considering the fact that many diseases are both stress-related and predominant among women, including but not limited to Irritable Bowel Syndrome (IBS), Mitral Valve Prolapse (a condition of the heart), and Temporomandibular Joint Syndrome, or, TMJ (Domar, 1996, p. 16). When a woman experiences long-term, chronic stress, it begins to take its toll on the body. Chronic stress causes a number of physical and physiological malfunctions, including a depletion of the anti-stress hormones DHEA, estrogen, progesterone and testosterone. In essence, when a truly stressful event occurs in a woman's life, her body is unable to respond due to the depletion of these important hormones (Cherewatenko, 2003, p. 24).

This project is meant as a baseline study to provide an introductory picture of how professional women in Tarrant County view their stress responses and how those stress responses affect them in the performance of their daily activities, and whether or not these views reflect the information in the literature. Thus, the following research question was formulated: Do professional women in Tarrant County experience symptoms of the Female Stress Syndrome in the same way that the research literature describes? To begin, the literature review will provide a foundation of understanding regarding the etiology of the Female Stress Syndrome.

CHAPTER 2

LITERATURE REVIEW

The father of modern stress research was Hans Selye, M.D. After spending many years studying stress and its effects, Dr. Selye probably developed the best perspective on the role of stress and disease. He stated that stress itself should not be viewed as a negative phenomenon. It is not the stressor but the individual's response to the stressor that determines the response (Murray, 1998, p. 178). Selye perhaps summarizes his view best in a passage from his book *The Stress of Life*:

> No one can live without experiencing some degree of stress all the time. You may think that only serious disease or intensive physical or mental injury can cause stress. This is false. Crossing a busy intersection, exposure to a draft. or even sheer joy are enough to activate the body's stress mechanisms to some extent. Stress is not even necessarily bad for you; it is also the spice of life, for any emotion, any activity causes stress. But, of course, your system must be prepared to take it. The same stress which makes one person sick can be an invigorating experience for another (Murray, 1998, p. 178).

There are currently four major publications that address physiological, psychological, and emotional aspects of the Female Stress Syndrome. The first is entitled The Stress Cure, authored by Dr. Vern S. Cherewatenko (2003) ("Dr. Vern" to his patients). In his book, Dr. Cherewatenko discusses in great detail the etiology and symptoms of Female Stress Syndrome. He diagnoses Female Stress Syndrome when a woman experiences "persistent and recurrent feelings of sadness, being overwhelmed, physical exhaustion, emotional and mental exhaustion, extreme anxiety or tension, anger or rage, irritability, or a general feeling of being out of control" (p. 13). He compares it to a car running out of gas, except the gas is the ability (or "fuel") to cope with life's stressors. Dr. Cherewatenko states that never before in U.S. history have women been exposed to such high levels of stress for such long periods of time (p. 13). Today's women feel compelled to take on multiple roles to adapt to the barrage of societal demands that are placed on them and that are constantly changing (Domar, 1996, p. 8). Dr. Cherewatenko quotes a study conducted by Roper Starch Worldwide, which covered the United States, Britain, Germany, France, Russia, Hungary, South Africa, Brazil, Argentina, China, India, Indonesia, and the Philippines. Results showed that life is harder on women than men universally:

- More white-collar women feel "superstressed" than their male counterparts.
- More single women feel intense daily stress than single men.
- Divorced or separated women feel far more stress than divorced or separated men.

- Widowed women feel more stressed than widowed men by a margin of almost two to one (p. 14).

Dr. Cherewatenko discusses some red-flag physical and physiological complaints that cause him to suspect that a woman may be suffering from Female Stress Syndrome. A few are listed here:

- Fatigue
- Headaches
- Abnormal throat sensations
- Sweating abnormalities
- Anxiety, panic attacks
- Decreased memory, confusion
- Poor coordination
- Abnormal swallowing
- Excessively tired after eating
- Infertility (p. 16).

In addition to the physical complaints, Dr. Cherewatenko also discusses some qualitative data regarding his patients' complaints. Dr. Cherewatenko has worked with more than 2,000 women of various ages and occupations in a special stress-reduction program in his private practice in Rendon, Washington. The following are direct quotes from Dr. Cherewatenko's patients:

- "It feels as though something inside me is ready to explode."
- "I have almost no power over what I do or say. I feel completely out of control."
- "I have waves of fear and panic that don't make sense."
- "I feel overwhelmed by everything."
- "I am numb. It is as if I have no good feelings anymore."
- "I can't wake up. I just feel tired constantly."
- "I feel trapped by responsibility."
- "I feel tremendously guilty."
- "I just want to go away."
- "I ache all over...my body, my mind, my heart" (p. 14).

Dr. Cherewatenko describes the reaction the body has to stress and how Female Stress Syndrome develops. The body's response to stress begins in the brain. The brain alerts the sympathetic nervous system to kick into high gear. The sympathetic nervous system then alerts the adrenal glands to produce large amounts of the hormones cortisol, adrenaline, and noradrenaline, the "fight-or-flight" response (Cannon, 1932). By one estimate, most people have approximately fifty fight-or-flight responses in a single day. For many women, the first one occurs as soon as their alarm clocks go off (Domar, 1996, p. 11). This fight-or-flight response is only meant to occur for an acute incident that eventually comes to an end, and then the body's hormone level returns to normal (Selye, 1956). What is happening today is that women are constantly living in a fight-or-flight state, thus causing hormone levels to remain elevated and causing damage to the body's

organs (Cherewatenko, 2003, p. 33). This is also causing a condition called adrenal burnout. Another problem that women today are having that is directly related to adrenal burnout is low DHEA levels due to the overabundance of cortisol in the body. DHEA is a naturally occurring hormone known as the "anti-stress" hormone. When cortisol levels remain high due to adrenal burnout, DHEA is depleted and the body is no longer able to cope with the stressors it encounters. (DHEA will be discussed in greater detail later in this chapter.)

To combat these issues, Dr. Cherewatenko offers a seven-step De-STRESS program for women suffering from Female Stress Syndrome:

DHEA – safely replenish levels of this stress-fighting hormone (p. 81)

Supplemental Nutrition – replace vitamins, minerals, and electrolytes lost to stress (p. 103)

Taming the Tiger – pursue meditation, yoga, and other stress-busting, mindful living methods (p. 130)

Rekindling Relationships – take a new approach to work and family relationships (p. 147)

Exercise – exercise in ways to increase energy and mental focus (p. 158)

Sensible Eating – keep your emotions from ruling your palate (p. 176)

Sound Sleep – "quality sleep" helps keep hormones stable (p. 195).

The second body of reviewed research is by Georgia Witkin, Ph.D. Dr. Witkin, in her book The Female Stress Syndrome (1991), states that because of the unique

physiology of women they are in "double jeopardy" in that not only are women at risk for all the usual stress symptom manifestations from hypertension to ulcers, but they are also at risk for problems such as infertility, premenstrual tension and anxiety neurosis (p. 21). In addition to the physical symptoms of Female Stress Syndrome (similar to Dr. Cherewatenko's list), Dr. Witkin also discusses the "four d's" which represent cognitive symptoms of Female Stress Syndrome, the changes in a woman's thinking behaviors. The first symptom is disorganization. Second, decision-making becomes increasingly difficult. Third, dependency-fantasies begin to occur. Dependency needs are generally intensified for a woman during periods of tremendous stress, yet these needs are not necessarily met. Therefore, a woman may begin to fantasize about ways in which those needs can be met legitimately (p. 70). Dr. Witkin states that a patient told her that she fantasized about one week in the hospital. She did not wish for anything to be seriously wrong with her. She just wanted one week where she could rest, watch television, have visitors (or not), read, receive flowers and cards, and just be appreciated in general (p. 70). Lastly, depression (not necessarily clinical) sets in, causing a woman to want to do nothing but eat or sleep, for example. Simple aches and pains are not so simple anymore, and the capacity to carry out basic tasks of daily life will become diminished. If this mindset continues for a long period of time, it can become permanent (p. 70).

In addition to the symptoms of Female Stress Syndrome described by Dr. Cherewatenko, Dr. Witkin describes a few additional symptoms that affect some women. This first one is anorexia nervosa. This is an eating disorder that usually affects young affluent or middle-class females. This disorder is one way in which women feel as

though they have some sense of control over their stress. Another type of eating disorder, Bulimia, is an additional symptom to be considered. Alcoholism and smoking are also on this list. Finally to be considered is a condition called amenorrhea. This condition occurs when a woman suddenly stops having periods when she is not experiencing menopause (p. 57). Stress and unresolved emotions have been shown to alter and disrupt hormonal balances and can also influence the menstrual rhythm (Domar, 1996, p. 14).

A third body of work reviewed is by Dr. Brent Bost in The Hurried Woman Syndrome (2005). Bost discusses why there has been an increase in female stress in recent years. He describes three major demographic shifts that have occurred over the last few decades. He suggests that these sociological changes have dramatically raised stress levels for women over the last few years (p. 36). The first of these stressors is work. The U.S. Labor Department reports that twice as many women with school-aged children are working in full-time positions in 2004 as did in 1964 (p. 36). Women are also in increasingly higher-stress positions than ever before. The second stressor is a combination of delayed childbearing and increasing longevity. The longer a woman may wait to have children the more likely it will be that she will have to care for her aging parents while she is trying to raise her own children. The third stressor has to do with divorce and the number of women who are trying to balance all of the competing needs in their lives on their own. Without the help and support of a significant other, women are finding themselves feeling more stress to balance their lives (p. 37).

Bost also suggests seven steps to help women battle female stress. The first step is to create balance in your body (p. 85). This includes taking vitamins; limiting sugar,

alcohol and caffeine; and balancing hormones. The second step is to find the right caloric balance (p. 121). A good rule of thumb is the 40/30/30 rule: 40 percent of caloric intake should be from protein, 30 percent should be from fats, and 30 percent should be from carbohydrates. The third step is to exercise, no matter what (p. 137). This is important not only to balance calories, but it also helps to build positive energy in the body and helps release stress from the body. The fourth step is to rekindle the fire (p. 185). This step addresses sexual issues that affect the woman with female stress, such as decreased libido and infertility issues. Step five is to identify your priorities and set reasonable limits (p. 245). Many times just rearranging priorities in one's life will help lower stress levels. Step six is to get the best of stress (p. 273). Learning good stress management techniques will help decrease the effects of female stress. Finally, step seven is to organize your world (p. 317). Keeping things organized gives a sense of control and thus can help to decrease stress.

The fourth body of research comes from Harriet Braiker in The Type E Woman (1986). Braiker states "with the explosion of opportunity (for women) has come a female revolution of rising expectations – and an avalanche of stress" (p. 7). The main thesis of Braiker's book is that stress responses are, indeed, different for women and men. She writes, "the nature of women's stressors, the reasons behind their stress, and the behavioral coping styles of women are different from those than men", referring to the physiological and societal issues that women face (p. 13).

Braiker says that Type E stress is a cognitive-behavioral issue. It means that to overcome her stress issues, the Type E woman must understand the etiology of her stress

in psychological terms – how she thinks about herself, her achievements, and her relationship with others. Type E behavior, says Braiker, is continually fueled by a set of dysfunctional cognitions that serve to exacerbate and perpetuate the dis-stress cycle (p. 17). In other words, the Type E woman's perception of herself has been, at some point, flawed and the only way she will get a grip on her stress is to understand the cognitions that lead to the behaviors that perpetuate the stress cycle.

Braiker suggests that breaking the stress cycle requires the Type E woman to recognize that coping by trying to be everything to everyone and please everyone except herself will not work in the long run (p. 6). Quite often, the Type E woman feels as though she is wearing an "S" on her chest because she perceives that she is supposed to be "Superwoman" – everything to everyone. Women are inherently pleasers/nurtures and tend to try to be all things to all people, ultimately forgetting about themselves and their own needs. Braiker says that instead of giving up her multiple roles or need for achievement, the key for the Type E woman is to redefine the behavioral criteria for successful fulfillment of whatever role she ultimately chooses for herself. In this way, a woman can "have it all" without nearly killing herself by trying to "do it all" (p. 6).

Braiker also suggests that stress is a part of a "social disease"; an adaptation to social and cultural conditions. Type E stress can be viewed as the female adaptation to the awkward period of social/historical change of late twentieth-century America. For example, men's adaptation has been toward the high-speed, high-tech, high-information, high-competition society of the late twentieth century. Women have not only had to adapt to the rate of change, they have been exposed to a vastly different set of social and

cultural stressors. While men have obviously been affected by the changes that women have undergone in the last decade or so, the changes, after all, have happened *to* the women" (p. 32).

Braiker's advice to the Type E woman is to discover the underlying dysfunctional cognitions that make them feel like they have to be all things to all people. Once they can identify those dysfunctional cognitions, they can change those cognitions and, in essence, they can change their "Superwoman" behaviors.

In addition to these main bodies of work, there are other related research projects that have looked at some of the issues relevant to the Female Stress Syndrome at a hormonal level. The Department of Reproductive Medicine and Child Development, Division of Gynecology and Obstetrics at the University of Pisa, Pisa, Italy, did a study entitled "Disadaptive disorders in women: allopregnanolone, a sensitive steroid", and its relation to women's reactions to stress. Allopregnanolone is a neurosteroid found in all humans. It modulates behavior and biochemical responses to acute and chronic stress as well as anxiety and depression (Pluchino et al, 2004). According to the study, several parapsychological events and various disadaptive disorders in women are associated with modifications of circulating levels of this neurosteroid that might be associated with a certain vulnerability to an altered adaptation to stressful life events (Pluchino, et al., 2004). One psychological finding from current study on Female Stress Syndrome has to do with the hypothalamic-pituitary-adrenal (HPA) axis. A study from the Department of Obstetrics and Gynecology, Division of Reproductive Endocrinology, University of Ioannina, School of Medicine in Ioannina, Greece showed that the HPA axis, when

activated by stress, exerts an inhibitory effect on the female reproductive system. Corticotropin-releasing hormone (CRH) inhibits pituitary luteinizing hormone and ovarian estrogen and progesterone secretion. These effects are responsible for the "hypothalamic" amenorrhea of stress, which is observed in anxiety and depression (Kalantaridou et al, 2004). Young and Altemus (2004) state that the HPA axis is one of the major systems involved in responses to stress, and this system is clearly influenced by ovarian hormones. Motzer and Hertig (2004) agree that the HPA axis interacts with the female reproductive system, thus making stress responses different in women and men.

America's working women have been hit particularly hard by the stress epidemic (Cherewatenko, 2033, p. 53). Dr. Cherewatenko (2003) quotes a survey done by the AFL-CIO in 2000 that revealed that professional women feel "stressed out and overwhelmed" (p. 53). The survey goes on to state that 60% worked 40 or more hours a week. Of those with children under 18, half worked different shifts from their spouses or partners (Cherewatenko, 2003, pp. 53). A Duke University study concurred, finding that working women with children have higher levels of stress hormones than women without children (Cherewatenko, 2003, p. 53). This scenario causes feeling of defeat in women and their partners. A career that was supposed to be of financial and personal benefit to a woman and her family typically turns into feelings of frustration, sadness, feelings of disappointment, and feelings of being overwhelmed (Cherewatenko, 2003, p. 53).

According to a recent study published in Psychosomatic Medicine (1999), the combination of high job stress and large family responsibilities spells significant and persistent increases in blood pressure for white-collar women who hold a university degree, a new Canadian study shows. And, unlike men, their elevated blood pressure persists at home after working hours. In the Canadian study, it was only among white-collar women who have university degrees that a significant association was observed between blood pressure and stress on the job and at home (http://www.demko.com/m990405.htm#four, 2006). The women in the sample wore monitors that took readings for 24 hours of diastolic and systolic blood pressure every 15 minutes during the day and evening hours and every 30 minutes between 10 p.m. and 7 a.m.. The data were correlated with diaries in which each woman noted her physical activity and any stressful events before and at the time of each blood pressure reading. The researchers found that two or more children significantly contributed to increased blood pressure, but one child did not. The proportion of housework performed by the women in combination with the volume of housework they did had a significant effect on their blood pressure (http://www.demko.com/m990405.htm#four, 2006).

In another interesting study done by Memphis State University's Margaret Fong, Ph.D. (1992), Fong found "indicators of more distress in single women, such as level of illness, stress symptoms, psychological distress, and depression" (http://health.yahoo.com/centers/stress/1756, 2006). While they seemed to experience the same stressors as other women, "for some reason the life outcome is more negative for single women" (http://health.yahoo.com/centers/stress/1756, 2006). Fong is not sure

why this phenomenon occurs, but she feels that single, professional women are a high-risk group for experiencing negative effects of stress, and further research needs to be done (http://health.yahoo.com/centers/stress/1756, 2006).

Managing the Female Stress Syndrome

Dehydroepiandrosterone (DHEA) plays a critical role in the management of the Female Stress Syndrome. When presented with a stressful situation, the body produces cortisol, which releases glucose into the bloodstream to assist the body in the fight-or-flight response. DHEA has been called a hormone precursor because it is ultimately converted into the sex hormones testosterone, progesterone, and estrogen. DHEA is manufactured primarily by the adrenal glands but it is also made by the testicles, ovaries and the brain. DHEA appears to be the "anti-stress", or stress-fighting hormone. If cortisol is the warrior hormone, DHEA is the hormone that counters cortisol. Once the stressful event is over, DHEA steps in to restore peace and calm to the body. However, when stress remains at chronic levels, the adrenal glands never get to rest, so they continue to pump out cortisol to the body, keeping it in a perpetual fight-or-flight state. As more and more cortisol is produced, the body cannot keep up with DHEA production, thus it becomes depleted. Once the body's DHEA level is depleted, the body remains in a hypervigilant state and the body, in turn, becomes unable to provide enough fuel to cope with the continual stress (Cherewatenko, 2003, p. 28).

Over time, the constant state of hypervigilance causes much wear and tear on the body. Since DHEA is used by nearly every tissue in the body for proper functioning, it stands to reason that as DHEA levels decline, there is evidence of a decrease in the

body's ability to remain healthy, and this can lead to serious illness. When a woman is young, her DHEA levels climb steadily. DHEA reaches a maximum level at approximately age 25. After age 30, DHEA levels begin to slowly decline. The decline will continue as a woman ages. Under normal circumstances, by age 90, a woman's DHEA level is at approximately 10% of its maximum level. Today, however, a woman's DHEA levels are peaking in her mid-twenties and dropping rapidly in her mid-thirties. This means that a woman's DHEA levels are dropping to critically low levels at a much earlier age than what is considered to be normal (Cherewatenko, 2003, p. 30). The rapid decrease in DHEA is coupled with an increased inability to cope with the slightest of life's stressors, and can cause serious health problems for a woman. Dr. Cherewatenko (2003) states, "I believe this phenomenon is a direct result of excessive stress caused by increasingly demanding lifestyles overwhelming the body's ability to produce essential coping hormones, such as DHEA" (p. 31).

A lack of DHEA is related to almost every major disease from diabetes, cardiovascular disease, and immune disorders to depression and other mental disease, osteoporosis, and even cancer. DHEA modulates diabetes, obesity, carcinogenesis, tumor growth, neurite growth, virus and bacterial infection, stress, pregnancy, HTN, collagen and skin integrity, fatigue, depression, memory, and immune responses (Cherewatenko, 2003, p. 33). Low DHEA, combined with other nutritional deficiencies leads to insulin resistance, a key risk factor for weight gain and type 2 diabetes (Cherewatenko, 2003, p. 34).

DHEA needs to be evaluated before DHEA therapy begins. DHEA levels can be measured by saliva or blood tests. It is important to have a baseline level before taking DHEA supplements. Most women suffering from the Female Stress Syndrome have DHEA levels that are undetectable by laboratory tests. The goal is to get a woman's DHEA level into the normal range, which is around 550-980 ng/dl. While low DHEA may be a result of biology, more than likely it is a result of stressful living. Maintaining appropriate DHEA levels allows the body to adapt to life's stressors with vigor and vitality (Cherewatenko, 2003, p. 83).

Poor nutritional choices can become a major metabolic stress. Nutritional deficiencies, too much protein or fat in the diet, or food allergies can affect a woman's body's stress level and disturb the body's level of coping hormones (Cherewatenko, 2003, p. 44). High stress levels increase nutrient needs well beyond daily recommendations (Atkins, 1998, p. 31). The increased production of adrenal hormones during periods of stress causes an increase in the metabolism of fats, proteins, and carbohydrates necessary to produce quick energy for the body to address the perceived stressor (Keegan, 2002, p. 33). As a result of this increased metabolic response, there is also an increase in the excretion of potassium, phosphorus, calcium and vitamin C. If there is prolonged or chronic stress in the body, these minerals and vitamins will be depleted, thus making supplementation necessary (Keegan, 2002, p. 33). Many of the disorders in the body are not the result of the stressor itself. Rather it is a result of the nutritional deficiencies caused by the increase in the metabolic rate during the perceived stressor (Keegan, p. 33). The more stress a woman is under, the more protector

nutrients she needs (Atkins, 1998, p. 40). These nutrients can be obtained through proper supplementation with vitamins and minerals in pill or liquid form.

According to Dr. Robert Atkins (1998), coping successfully with stress may depend upon the appropriate levels of vitamin C in a woman's body than any other nutrient (p. 98). The adrenal glands contain more ascorbate than any other part of the body. Vitamin C assists in the manufacture of these stress hormones and protects the body from toxins created as the hormones are metabolized (Atkins, 1998, p. 98). Another nutrient Dr. Atkins suggests to help combat stress is phosphatidyl serine (PS). PS maximizes nerve transmission between brain cells by supplying them with this important nutrient. (Atkins, 1998, p. 253). Taking PS regularly can help tame the production of cortisol in the body, which can assist in stress control (Atkins, 1998, p. 254).

Another important, yet overlooked, nutrient needed for the management of stress is water. Thinking that tea, coffee, alcohol, and other non-water beverages can be a good substitute for good, pure water is a mistake, especially since the body is confronted daily by stressors that tend to be dehydrating (Batmanghelidj, 2002, p. 17). When other non-water substances are ingested the body eliminates more water than is contained in the drink. When the body becomes dehydrated, it uses a strict rationing system to get available water to the parts of the body that need it most (Batmanghelidj, 2002, p. 18). The body uses a simple supply and demand principle when deciding where to route available water. Depending on the type of demand, the organ or organs in the firing line of activity begin to indicate their particular signal of inadequacy (Batmanghelidj, 2002,

p. 18). Water intake should be considered when treating the Female Stress Syndrome because it helps reduce stress, anxiety, and depression (Batmanghelidj, 2002, p. 33). In essence, a well-hydrated body can help reduce the effects of the Female Stress Syndrome.

Food choices are crucial in the management of the Female Stress Syndrome. According to Bost (2005), most nutritional experts agree that in a healthy diet, 40 percent of calories should come from protein, 30 percent from fats, and 30 percent from carbohydrates (p. 134). In other words, the ultimate goal here is to balance caloric intake. Balancing calories has several advantages:

- It's simple. Once some simple rules of counting and conversion are learned, it will be easier to track caloric intake.
- It's flexible. As long as the 40/30/30 balance is observed, a woman is not limited to what she can eat as long as the portion sizes are reasonable. There are no special foods to buy, and it allows for the occasional eating out.
- It's adaptable. A person observing this type of program can learn to "cheat" a little bit without adversely affecting a weight management program.
- It's effective. According to Bost (2005), this method is the most effective for long-term weight management and it works for anyone, male or female (p. 135).

Additional nutritional recommendations include eating a diet composed of 50-75 percent raw foods, avoiding processed foods, and avoiding alcohol, tobacco, and drugs (Balch, 2000, p. 649).

In addition to DHEA and vitamin C, there are other supplemental nutrients that are important when managing the Female Stress Syndrome. Below are the recommended vitamins and minerals that can help manage stress symptoms: Vitamin A, The "B" vitamins, Para-aminobenzoic (PABA), Inositol, Folic Acid/Folate, Vitamin D, Vitamin E, Vitamin K, Coenzyme Q10 (CoQ10), Boron, Calcium, Chromium, Copper, Iodine, Iron, Magnesium, Manganese, Molybdenum, Phosphorus, Potassium, Selenium, Sodium, and Zinc (Cherewatenko, 2003, p. 114). While this seems like an exhaustive list and entirely too many pills to take in one day, there are multi-vitamin supplements that include most all of these in one tablet or pill, thereby making it easier to get all of these vitamins and minerals on a daily basis.

Vitamins and minerals are not the only nutritional supplements that can be used to manage stress. There are certain herbs that can be used as well. The function of most botanical medicines addresses the adrenal glands, since the exhaustion of these glands seems to be one of the root causes of the body's inability to cope with stress. One of the herbs that is most highly recommended is Ginseng. Both Chinese Ginseng and Siberian Ginseng have shown to be beneficial to adrenal function and enhance resistance to stress (Murray, 1998, p. 186). The ginsengs are also often referred to as adrenal tonics because they increase the tone and function of the adrenal glands (Murray, 1998, p. 186). This is important when creating a treatment plan with a woman who has the Female Stress Syndrome because her vital energy has been altered and the ginsengs can be used to restore vitality, increase feelings of energy, increase mental and physical

performance, prevent the negative effects of stress and enhance the body's response to stress, enhance liver function, and offset some of the negative effects of cortisone (Murray, 1998, p. 186). Based on the clinical and animal studies, it appears that ginseng offers significant relief to people who suffer from stress and anxiety (Murray, 1998, p. 187).

Kava Kava is another herb that is recommended to help with stress. Kava Kava is effective in relaxing the mind and body as are hops, valerian and passion flower (Kalyn, 1999, p. 211; Balch, P. 2000, p. 648). Ashwagandha is an herb that acts as a sedative and nerve tonic. Bilberry prevents destruction, mutation, and premature death of cells throughout the body. Ginko biloba aids in proper brain function and good circulation. Milk thistle cleanses and protects the liver and has antioxidant properties. Camomile is a gentle relaxant. It is a good nerve tonic, soothing to the digestive tract and a pleasant sleep aid (Balch, 2000, p. 648).

It is important to address nutritional issues with a woman who has the Female Stress Syndrome. Quite often a few nutritional and dietary changes will help a woman better deal with the effects of stress.

According to a study in the January. 28, 1993, New England Journal of Medicine, 1 in 3 patients used alternative therapy in 1990 (http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm, 2006). More than 80 percent of those who use alternative therapies used conventional medicine at the same time, but did not tell their doctors about the alternative treatments (http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm, 2006). In 1990, Americans made an

estimated 425 million visits to alternative health practitioners-more than they made to primary care physicians (http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm, 2006). In 1992, the National Institutes of Health in Bethesda, Maryland, established the Office of Alternative Medicine, which devotes more than $3 million a year to exploring unconventional healing techniques such as meditation, massage, vitamin therapy and herbal therapy (http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm, 2006). In 1993, Americans spent an estimated $1.5 billion on herbal remedies, including teas and supplements. While this amount is considerably less than the $13.3 billion spent on over-the-counter drugs, it's more than ten times the amount we spend on over-the-counter sleeping pills from grocery stores and drugstores (http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm, 2006).

Alternative medicine describes treatments which are not orthodox (mainstream medicine) - treatments which are an alternative to orthodox. In general, therapies are based on Bechamp's 'polymorphism and terrain theory' which acknowledges and works with the body's own in-built healing mechanisms (Bradshaw, 1996, www.whale.to/y/alt.html). Alternative medicine tends to be drastically opposite to orthodox medicine and in some areas cannot be compatible with it. For example, this type of health care, using its own diagnosis and treatment, could be involved with tissue detoxification (e.g. of dental materials, drugs, vaccines, pesticides, chemicals), and with nutritional and metabolic restoration (Bradshaw, 1996, www.whale.to/y/alt.html).

Holistic (wholistic) medicine considers the whole person and not fragmented parts

such as liver, bones, mind, heart, etc., while Western medicine tends to treat the symptoms of a patient's complaint instead of searching for the root of the patient's symptoms. In holistic medicine, symptoms are viewed as the manifestation of a deeper problem. Healthy people are seen as integrated, interactive whole entities on all planes (spirit, soul and body). By its nature all holistic medicine is alternative (to orthodox) but not all alternative medicine is holistic (Bradshaw, 1996, www.whale.to/y/alt.html).

Homeopathy is one of the fastest-growing forms of medicine in North America (Balch, 2004, p. 625). Homeopathy uses ultra-diluted amounts of plant, mineral, and animal substances to stimulate the healing systems of the body (Balch, 2004, p. 625). Homeopathy can be used to strengthen the immune response in the body, and to stimulate healing of mental or emotional imbalances, therefore making it a good treatment alternative for the Female Stress Syndrome (Balch, 2004, p. 625).

Traditional Chinese Medicine (TCM), rooted deep in China's ancient past, is also a popular form of alternative medicine (Balch, 2004, p. 661). Generally, TCM refers to healing with herbs, although this is certainly not inclusive of TCM. In addition to Chinese herbal remedies, there are other modalities that can be used to help treat the Female Stress Syndrome. Acupuncture is often used in the West to treat chronic conditions, but TCM uses Acupuncture to help fine-tune the body and restore balance (Balch, 2004, p. 665). Balch (2004) states," think of an acupuncturist as a piano tuner, carefully checking each of the ivory and ebony keys and adjusting any sour note to conform to its harmonic whole. In our view, this is even more important today, as we deal with an ever-rising level of stress in our modern world. We need 'new,' yet tested,

ways to dissolve the damaging array of stressors to which we are continually subjected" (p. 665).

Acupressure is another treatment modality in TCM that can be helpful in treating stress conditions. Thousands of years ago, Chinese doctors noticed that something beneficial was happening with massage. These physicians wanted to learn more about this phenomenon so that they could teach it to others. Over the years, this therapy has been known as acupressure (Balch, 2004, p. 666). By manipulating specific points in the body with the hands and fingers, applying pressure along crucial meridians, endorphins can be released along with other natural substances that can block pain. By stimulating the flow of blood, this modality can soothe sore muscles and relax the body, promoting the body's natural ability to heal itself (Balch, 2004, p. 666).

Osteopathic medicine is another treatment modality that can be used to help treat stress. Osteopathy is a system of medicine based on the premise that the bone structure is related to the internal health of the body. Osteopathic physicians use manipulation to help patients with musculoskeletal and systemic disorders (Balch, p. 686).

Finally, mind-body medicine is a growing sub-field in alternative medicine that can also be effective in addressing the Female Stress Syndrome. Domar (1996) states that "much of our emotional and physical suffering can be alleviated by powers that reside within. By drawing upon our innate capacities for emotional well-being and inner peace, we can return to a place of wellness and well-being" (p. 3). Domar also posits that there is an important reason to look at a mental approach to physical ills. The stress of life and the distress it causes can wreak havoc on the human body. The heart is over

stimulated, causing an imbalanced hormonal output, resulting in a weakened immune system. There is now evidence that a woman's reproductive system can be adversely affected by stress and ongoing emotional upset (p. 4). Therefore, since the mind and body are connected, efforts to heal the mind will have a profound effect on the body and its functions (Domar, 1996, p. 5). To address this issue, some alternative practitioners subscribe to the theory of the "relaxation response". The relaxation response is a coordinated series of internal changes that occur when the mind and the body become tranquil (Domar, 1996, p. 19). The idea behind the relaxation response is to get the body to settle itself down. Regardless of the method used to accomplish this, the relaxation response in each individual is roughly the same: Heart rate, respiration, muscle tension, and oxygen consumption fall below resting levels. Normal waking brain wave patterns shift to predominantly slower patterns, and, in some individuals, blood pressure decreases (Domar, 1996, p. 19).

One likely reason why the relaxation response is applicable to women's health issues is the considerable impact of stress on women's bodies (Domar, 1996, p. 21). This is important in regards to the Female Stress Syndrome because when relaxation is practiced on a regular basis, adrenaline and noradrenaline are still released when a stressful event occurs, but these hormones no longer have the same over stimulating effect on the body's tissues, muscles and organs, including the reproductive organs (Domar, 1996, p. 21). There are many different ways that a woman can choose to activate this relaxation response, including but not limited to yoga, prayer, meditation, sexual activity, and deep breathing techniques. The method chosen depends primarily on

personal preference or belief, and the amount of time a woman chooses to invest in relaxation.

CHAPTER THREE

METHODOLOGY

A qualitative design was chosen for this project using focus group methodology. Focus groups were the chosen method of gathering data to provide the opportunity of collecting information-rich data on stress experiences of professional women. Focus groups are an important method to gain exploratory qualitative data that can stand on its own or then be used to shape future research, such as qualitative in-depth interviews or quantitative surveys (Hesse-Biber, 2006, p. 195).

In a focus group, multiple participants are interviewed together, making this type of data collection distinct from the individual interview Hesse-Biber, 2006, p. 196). Focus groups have an advantage over other research methods when the researcher is seeking a deeper understanding and a broader view of the issues surrounding the research topic (Hesse-Biber, 2006, p. 196). Focus groups can help the researcher narrow the key issues, ideas, and concerns to be addressed from speaking with multiple participants at one time (Hesse-Biber, 2006, p. 196).

Focus groups are used for three different reasons in market research: (1) clinical, (2) exploratory, and (3) phenomenological (Hesse-Biber, 2006, p. 196). When focus groups are used for clinical reasons, the goal is to uncover the participants' underlying feelings, attitudes, beliefs, opinions and subconscious causes of behaviors. When used

for exploratory purposes, focus groups are useful for generating, developing and screening ideas or concepts. Focus groups are used for phenomenological purposes when a researcher wants to discover participants' shared everyday life experiences such as their thoughts, feelings and behaviors (Hesse-Biber, 2006, p. 196). Hesse-Biber (2006) states, "Focus groups are a profound experience for both the researcher and the research participants that generate a unique form of data. They tell the qualitative researcher about things about social life that would otherwise remain unknown" (p. 197). This statement is certainly true in regards to this project. The conversations between the researcher and the participants yielded rich information that could not have been otherwise collected through quantitative methods.

In this study, three different focus groups were held representing three different ethnicities of professional women: Caucasian, Black, and Hispanic. Focus group participants were recruited in several different ways. The Caucasian participants were all members at the Heritage Church of Christ in Keller, Texas, and they were provided with fliers about the study at the beginning of adult Sunday morning Bible classes. The Hispanic women were recruited via a flier that was faxed to a key figure in the Hispanic women's community. The third focus group of Black participants were recruited by an announcement that was made at a local business meeting that black women were needed to participate in a research study (see flier in Appendix B).

For this project, a discussion guide was created by the researcher (see Appendix for a copy of the guide) using several questions from Dr. Cherewatenko's (2003) Stress Cure Inventory (p. 60-62). The discussion guide also contained several original questions

created by the researcher. The discussion guide was focused around the research question: Do professional women in Tarrant County experience symptoms of the Female Stress Syndrome in the same way that the research literature describes? The focus groups were held at three different times at three different locations in Tarrant County. The first focus group, attended by Caucasian females, was held in October, 2005, at the Heritage Church of Christ in Keller, Texas. The second focus group, attended by Hispanic females, was held in November, 2005 at the University of North Texas Health Science Center at Fort Worth in the student lounge on the seventh floor of the administration building. The third focus group was conducted at the University of Texas at Arlington School of Social Work's Community Service Clinic in February of 2006, attended by Black females. Eight women attended the Caucasian group, two women attended the Hispanic group, and two women attended the Black group, for a total sample size of twelve.

All of the proper Institutional Review Board (IRB) required paperwork was distributed, filled out, and returned to the researcher before the focus groups began. The focus groups were audio-recorded and the participants were made aware of this before the group via a flier to recruit participants and by an announcement made by the researcher at the beginning of the group. The focus group process was explained to the participants. The questions were read by the researcher from the discussion guide and recording the answers of the participants as they were given. Data was analyzed by comparing responses and themes of each group. Focus group findings will be described in the next chapter.

The sample was not only ethnically diverse, it was diverse in other areas as well. 58% of the participants were classified as "not married". 42% were classified as "married". 33% of the sample population was between 18 and 30 years of age; 25% was between 41 to 50 years of age, and 25% was between 51 and 60 yeas of age. 58% of the respondents said they had children; 42% said they did not have children. Of those that did have children, 42% of those respondents said they had children over 18 years of age. 42% of the sample population reported they earned a minimum of a Bachelor's degree. 25% report they earned some college credit, while 17% said they finished high school, and another 17% said they earned a Master's degree. The reported occupations among the participants was varied. The reported occupations were:

Physical Therapist/Administrator
Librarian
Child Care Worker
Fitness Manager
Dental Office Manager
Office Manager
Health Insurance Company Compliance Support Coordinator
Cost Accountant
Training and Development Manager
Social Work Case Worker
Tutor

Focus group participant responses can be analyzed at two different levels. On one level, the responses can be analyzed individually, referring to what each individual group member said. The second level would be an analyzation of the responses of the entire group. This is also known as the "group narrative". The group narrative that emerges is larger than the sum of its parts (Hesse-Biber, 2006, p. 222).

The analysis process for this project began by organizing the data that was collected and transcribed by the researcher during the focus groups. Open-ended coding was then used to gain a better understanding of what information was contained in the data. The researcher took ten pieces of chart paper and wrote each one of the ten questions at the top of each one of the ten pieces of paper. Three categories were then written on the newsprint under the questions: Group 1, Group 2, and Group 3. The researcher took the written data from the focus groups and began to write down all of the answers to the questions from each group under each appropriate column. The goal was to organize the data in such a way that the data from each group could be seen all at one time and comparisons could be done. This format was transferred to 8 1/2 X 11 pieces of paper so that the data was in a more transportable form.

CHAPTER FOUR

RESULTS

The findings from this study are consistent with the literature in regards to how professional women experience stress. In addition to the overall group responses, there are some interesting individual responses that require some attention as well. The findings across the three groups are reviewed by question and interpreted as related to the literature.

Question 1: Describe how you feel when you know you are stressed. Be as specific possible.

The answers to this question, by and large, most closely reflect the literature. Most answers reflected physical issues related to stress, however, these answers also reflected some psychological issues related to stress. The number one response to this question across all three groups was "headaches", followed by an inability to focus or memory problems, having sleep patterns interrupted, and experiencing feelings of anger or irritability. There were interesting individual responses that warrant some attention. One participant reported that she experienced symptoms and received a diagnosis from a physician of Bell's Palsy during one period of great stress during her life. Bell's Palsy is characterized by facial muscles on the left side of the face becoming weakened or paralyzed. According to the Bell Palsy information site, this disorder is caused by trauma

to the 7th cranial nerve and is not a permanent condition (http://www.bellspalsy.ws/, 2006). Diabetics are more than 4 times more likely to develop Bell's Palsy than the general population. The last trimester of pregnancy is considered to be a time of increased risk for Bell's Palsy. Conditions that compromise the immune system such as HIV or sarcoidosis increase the odds of facial paralysis occurring and recurring (http://www.bellspalsy.ws/, 2006). This is especially interesting in light of what the literature says about how stress affects the immune system and the Central Nervous System. Stress tends to weaken both, leaving the body vulnerable for a host of potential problems (Cherewatenko, 2003, p. 16).

One other individual answer that was interesting was that one of the participants said, "I have to get clean. I feel like if I take a shower or bath I can wash the stress off," indicating a psychological connection between being physically clean and being able to handle stress more effectively.

Question 2: How often do you set limits on the commitments you make?

Overall, across the groups, everyone said they consistently set limits on their commitments. One participant said that the art of setting limits comes with age. Most participants said they used to over-commit but have gotten better about it by learning to say no to whoever or whatever was asking them to overstep their commitment boundaries. Only one person said that she does not currently set limits, and one participant reported that she must re-evaluate her commitments on a weekly basis.

Question 3: How often do you feel overwhelmed?

By and large, across all of the groups, was an agreement that participants felt overwhelmed on a daily basis. A few participants elaborated with statements like, "It depends on the day," and "When plans are de-railed."

Question 4: How often do you feel as though things are out of control?

Again, overwhelmingly, most of the participants said that daily they feel as though things in their lives are out of control. Other participants said that the feeling of being out of control depends on the situation, and that the feeling goes in cycles in that some days things seem to be in control and other days things are completely out of control.

Question 5: What do you do to try and actively reduce the stress in your life?

The answer given the most for this question was to "create", to do something creative, to paint, to do something with their hands, or to engage in hobbies. The second most popular answer was church or having spiritual time. Thirdly, the participants said they like to spend time with friends and family, and, lastly, they liked to talk to friends about the issues going on in their lives.

There were many other answers that warrant reporting as well, such as: walking, listening to music, lighting candles, taking a hot shower or bath, eating chocolate, screaming, sitting in the dark, sitting outside on the porch, eating, sleeping, digging in the garden, shopping, playing computer games, spending time with pets, going to movies, being involved in civic groups, and engaging in positive self-talk. Many of these answers

are addressed in Dr. Cherewatenko's (2003) DESTRESS program (p. 79). Dr. Cherewatenko (2003) writes, "For many people under a mild amount of daily stress, their learned behaviors can balance the incoming levels of stress. They may increase their exercise to compensate for the day's added stress or get a massage. They may talk to an empathetic friend or work in the garden, read, or listen to music" (p. 25).

Question 6: Think about the last time you visited the doctor. Was it for a stress-related illness?

All of the participants who answered this question, with the exception of one participant, said yes, the last time they visited the doctor it was for a stress-related illness. Reports of the nature of those illnesses varied from Hypertension (HTN) and infertility, to Irritable Bowel Syndrome (IBS) and muscular issues. One participant reported going to see a Registered Massage Therapist and not a physician to address her stress-related muscle problems.

Question 7: Do you feel a sense of urgency in your life?

Every participant in all of the groups answered yes to this question. One participant said, "I feel like I should be doing everything NOW. I use it as a driving force and motivation." Another participant said, "I want to get the 'S' off my chest because I know I am not Superwoman!"

Question 8: How do you juggle the demands of career and family?

All of the participants in each group agreed that this is a very difficult issue to address. As one participant said, "Something has to go!" Most participants concurred that the main thing is to admit that they cannot do everything and that planning and prioritizing are very important when juggling a career and a family. One participant said

that her homemaking suffers in that the laundry and house cleaning just do not get done sometimes. One participant said that she has to constantly set boundaries with her extended family as she is building her career because they are very demanding of her.

Question 9: How do you set goals and plan your time?

By far, the answers to this question were the most surprising to the researcher. Several participants said they do not set goals at all, while several other participants said they can set goals but keeping them is "another story". A majority of the participants use their computers to help them set goals and plan their day, while other use a day planner of some sort. The most surprising answer was from one participant who said, "This is how I feel about this issue: Setting goals is like cutting out coupons – you'll never use them."

Question 10: If you could change one thing in your life that you feel needs to be changed to achieve balance, what would it be and why?

Interestingly, most participants said that they would change some aspect about their career or job. One participant said she would either move closer to work or work closer to home. One participant said she would completely change jobs. One participant said she would have only one job. The second most popular answer to this question was that the participants would improve their nutrition. Other answers included more exercise, more money, and more time to do the things that are important to them, not what someone else (i.e., boss) thinks is important to them.

Across the board, the answers from each group to each individual question were similar. There were no "surprises" in the answers to any particular question. Overall, the answers from group three (the Black women) were much "deeper" and more thoughtful than the answers from the other groups. This could be because both of the respondents

are social workers. Social workers are trained to be very analytical, and this was evident with these two respondents.

There was one discussion about question 8 (How do you juggle the demands of career and family?) that occurred in the third group (the Black women) that stood out from the answers in the other two groups. One of the participants spent quite a bit of time explaining her family dynamics to answer that question. She explained that she was the first person in her family to graduate from college, much less go on to earn a Master's degree. She stated that in her family that are constantly trying to cross the boundaries that she has set for them in regards to what she feels is important in her life, namely her education. There is much conflict in her family when she is expected to be at a family function, for example, and she does not attend because she has homework to do or she must write a paper or do something related to her academic career. She has chosen to rise above the educational level of the rest of her family, and it causes conflict. She stated that she has lots of family issues, demands and conflicts, and that she must set strong boundaries with them, keep those boundaries, and be okay with that, no matter what her family says to her. She reports this is very common in African-American families when one family member steps out of the expected norm and achieves a new level of education or employment. The rest of the family feels this is a betrayal, and the achieving family member is often told they have become "White" for choosing a different path from the family norm.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

The results and findings of the focus groups clearly indicate that professional women of different races and ethnicities in Tarrant County perceive and experience stress in much the same way that the literature describes for women in general (Cherewatenko, 2003; Bost, 2005; Witkin, 1995). This is true for the physical and biological manifestations of stress in these women as well as the psychological manifestations of stress. Stress is an important topic for public health workers to be concerned about. In a 1998 report, the American College of Occupational & Environmental Medicine reports that depression and high stress have the greatest impact on worker health care costs (http://www.sciencedaily.com/releases/1998/10/981019073351.htm). More than 46,000 employees from six nationwide organizations were followed for up to three years, resulting in a database of over 100,000 person years, to evaluate ten modifiable health risks and their associated impact on health care costs (http://www.sciencedaily.com/releases/1998/10/981019073351.htm).

There may be several reasons for this finding. Depression and stress may cause patients to seek care for vague physical complaints; psychological or social problems may lead to more serious health conditions; or depression or stress may be related to serious illness resulting in an increase in physician office visits and more health care

claims being filed. According to the report, health care costs rose 46% for those workers who felt they were under a lot of stress (http://www.sciencedaily.com/releases/1998/10/981019073351.htm). Other health risks associated with significantly higher health care expenditures include: high blood glucose, past tobacco use, current tobacco use, high blood pressure, and lack of regular exercise (http://www.sciencedaily.com/releases/1998/10/981019073351.htm).

This information has direct implications for public health educators in particular. Public health is based on a premise of prevention, and all of the diseases and issues that are listed above are preventable conditions that have a plethora of information available about them that public health educators can and should disseminate. In the case of the working population, this information can be disseminated through employee wellness programs or Employee Assistance Programs (EAP). This information can also be disseminated through the public health educator working in a primary care setting.

It is recommended that more research be done in this area to help deepen the understanding of the Female Stress Syndrome and what can be done to help prevent it. This project had a very small sample size, so it is difficult to generalize these results to the entire population of professional women in Tarrant County. Additionally, the racial and ethnic mix of the groups was not equally distributed in this study. Gathering more information from more Hispanic and Black women would be beneficial in continuing studies in this area. Since there were only two participants in each of these groups it is difficult to generalize those answers to the entire Hispanic or Black population. Additionally, it is recommended that a longitudinal study be considered to further

examine this topic. Holding focus groups in environments where women are already congregating may help increase participation rates, thereby giving even more information about how women perceive and experience stress. Programs that educate women about and equip them to better manage the Female Stress Syndrome is also recommended. Finally, further study is recommended to compare ethnic and socioeconomic disparities in stress among professional women.

APPENDIX A

FOCUS GROUP DISCUSSION GUIDE

FOCUS GROUP DISCUSSION GUIDE

1. Describe how you feel when you know you are stressed. Please be as specific as possible.
2. How often do you set limits on the commitments you make?
3. How often to you feel overwhelmed?
4. How often do you feel as though things are out of control?
5. What do you do to try and actively reduce the stress in your life?
6. Think about the last time you visited the doctor. Was it for a stress-related illness?
7. Do you feel a sense of urgency in your life?
8. How do you juggle the demands of career and family?
9. How do you set your goals and plan your time?
10. If you could change the one thing in your life that needs to be changed to achieve balance, what would it be and why?

APPENDIX B

PARTICIPANT RECRUITMENT FLIER

APPENDIX B

YOU ARE INVITED TO PARTICIPATE IN A RESEARCH STUDY:

"Women and Stress: Investigating the Female Stress Syndrome."

Melissa Oden, LMSW, CLNH, Master's Candidate at the University of North Texas Health Science Center at Fort Worth School of Public Health, Department of Social and Behavioral Sciences is conducting a ***research study*** that is investigating the Female Stress Syndrome and how it manifests itself in professional women.

Focus Groups will be conducted during the month of October to discuss this issue (specific dates to be determined).

If you are a professional woman over the age of 18 and are interested in participating in a focus group, please contact Melissa Oden at 817-232-9992, or mstanfordoden@yahoo.com. Please specify in your call or e-mail what days/times you could attend a focus group. Dates for the groups will be set during the month of September and you will be notified what dates and times in October will be available.

Thank you in advance for your willingness to participate in this research study.

APPENDIX C

THE STRESS CURE INVENTORY: TAMING THE TIGER

APPENDIX C
TAMING THE TIGER

(Taken from The Stress Cure by Dr. Vern Cherewatenko)

"Stress is a tiger that is hard to tame for many people. The following 10 questions will help you identify how successful you are at using known stress reduction techniques. They will help you understand the priority you place on decreasing the level of stress in your life."

1. **How often do you set limits on the commitments you make?**
   1) I never set limits; I always take on more than I can possibly do.
   2) I try to set limits but I am not very effective. I always have more than I can possibly do.
   3) I will set limits and usually get most things accomplished, but when given a choice I will do for others at my own expense.d
   4) I will set limits and usually get everything accomplished, but I would like more time for my personal responsibilities.
   5) I have a healthy balance between commitments to others and commitments to myself.

2. **How often do you feel overwhelmed?**
   1) Constantly – 24 hours a day, 7 days a week.
   2) I nearly always feel overwhelmed – about 80% of the time.
   3) I usually feel overwhelmed – about 50% of the time.
   4) I occasionally feel overwhelmed – about 20% of the time.
   5) I rarely feel overwhelmed – about 5% of the time.

3. **How often do you feel as though things are out of control?**
   1) Several times a day.
   2) At least once a day.
   3) At least once a week.
   4) At least once a month.
   5) I never feel out of control.

4. **How much personal control do you feel like you have over your life?**
   1) I never feel I have control over what happens to me.
   2) I rarely feel I have control over what happens to me.
   3) I sometimes feel I have control over what happens to me.
   4) I usually feel I have control over what happens to me.
   5) I always feel I have control over what happens to me.

5. **How much responsibility do you have for your home environment?**
   1) 100%
   2) 75%
   3) 50%
   4) 25%
   5) 10%

6. How often do you actively try to reduce the stress in your life?

1) I never try to reduce stress; I can't do anything about it.
2) I try to reduce stress but in unhealthy ways (for example, alcohol)
3) I am occasionally active at reducing stress through healthy solutions.
4) I am usually active at reducing stress through healthy solutions.
5) I am very active at reducing stress through healthy solutions.

7. How often do you take a relaxing bath?

1) Almost never.
2) Occasionally – once every three months.
3) Monthly.
4) Weekly
5) Daily.

8) How often do you read purely for enjoyment?

1) Almost never.
2) Occasionally – once a month.
3) Once per week.
4) 15-30 minutes per day.
5) 30-60 minutes or more per day.

9. How often do you worry about your financial status?

1) I worry about finances all the time; I'm always behind with bills.
2) I worry all the time; some bills are overdue.
3) I usually worry about finances, but all bills are paid.
5) I never worry; I feel confident about my financial status.

10. How easily are you able to ask others for help?

1) I would never burden others with my problems or needs.
2) I rarely ask others for help, and when I do I feel guilty.
3) I occasionally ask others for help, but I feel I should have been able to handle things myself.
4) I will ask others for help as a last resort, understanding that I can't do everything.
5) I have no problem asking others for help when it is appropriate.

Add the point values of your answers from all 10 questions in this section. The maximum points in this section are 50.

TOTAL SCORE THIS SECTION _____

REFERENCES

Atkins, R. (1998). Vita-nutrient solution: nature's answer to drugs. New York: Simon & Schuster.

Balch, J. F. & Stengler, M. (2004). Prescription for natural cures. New Jersey: John Wiley & Sons, Inc.

Balch, P. & Balch, J. (2000). Prescription for nutritional healing. New York: Avery.

Batmananghelidj, F. (2003). You're not sick, you're thirsty! New York: Warner Book, Inc.

Beck, M. N. (1997). Breaking point. New York: Times Books.

Bost, B. (2005). The hurried woman syndrome. New York: Pathfinder Publishing.

Braiker, H. B. (1986). The type e woman. New York: Dodd, Mead & Company.

Cherewatenko, V. (2003). The stress cure. New York: HarperCollins.

Domar, A. D. (1996). Healing mind, healthy woman. New York: Henry Holt and Company.

Hesse-Biber, S. N. & Leavy, P. (2006). The practice of qualitative research. California: SAGE Publications.

Kalyn, W. (1999). The healing power of vitamins, minerals, and herbs. New York: Reader's Digest.

Keegan, L. (2002). Healing nutrition. New York: Delmar.

Murray, M. & Pizzarno, J. (1998). Encyclopedia of natural medicine. California: Prima Publishing.

Witkin, G. (1991). The female stress syndrome. New York: NewMarket Press.

http://www.holistic-online.com/Alt_Medicine/altmed_popularity.htm

http://www.whale.to/y/alt.html

http://www.demko.com/m990405.htm#four

http://health.yahoo.com/centers/stress/1756

http://www.bellspalsy.ws/

http://www.sciencedaily.com/releases/1998/10/981019073351.htm