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# Women and the Non-Traditional Educational Environment at Thaddeus Stevens College of Technology: A Case Study

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WOMEN AND THE NON-TRADITIONAL EDUCATIONAL ENVIRONMENT AT  
THADDEUS STEVENS COLLEGE OF TECHNOLOGY: A CASE STUDY

A Dissertation

Submitted to the School of Graduate Studies and Research

In Partial Fulfillment of the  
Requirements for the Degree

Doctor of Philosophy

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December 2011

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Title: Women and the Non-Traditional Educational Environment at Thaddeus Stevens

College of Technology: A Case Study

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There is a unique group of female students enrolled in a two-year technical college environment at Thaddeus Stevens College of Technology (herein TSCT) in Lancaster, Pennsylvania who suffer from stressors that their male counterparts do not experience.

A case study approach allowed me to explore the stressors these young women are facing in this male dominated, two-year college environment and determine if they had the potential to influence their academic performance and eventual graduation from the college.

The goal was to understand the stressors of these young women at TSCT and to develop a system to address these stressors with the end result being the matriculation and successful graduation of these students.

I administered a questionnaire to collect demographic information and utilized focus groups to gather data regarding stress associated with the students' educational experience.

The research uncovered several short and long term stressors. The short term stressors occur during the first few weeks of school and then subside as the students

successfully cope with them. These stressors were not affecting their academic performance or their persistence at the college.

Several long term stressors were revealed during this research. Long term stressors occurred consistently throughout their enrollment. These stressors, being more significant in nature, had the potential to affect academic performance and persistence. However, the students' enrollment was not adversely affected by these long term stressors.

Recommendations for the college administration were suggested by the participants to assist with the retention and enrollment of current and future female students. An area of future research would include research on those young women who have left the college; not only those who left while this study was occurring but those who have left during previous semesters. Determining the stressors they experienced that led to their dismissal or withdrawal would be very useful information for the college. Mechanisms could be put into place so that students experiencing these stressors could be helped before reaching the point of dismissal or withdrawal.

## ACKNOWLEDGEMENTS

I would like to express my thanks to my chair and committee members for their time, expertise and guidance through this process. I would also like to thank my husband and family for their continued support and encouragement throughout this entire process.

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## CHAPTER ONE: INTRODUCTION AND BACKGROUND ISSUES

According to the Economist, during the spring of 2010, women became the majority of the U.S. workforce. This economic empowerment is the biggest social change of our times. Women are no longer confined to menial, repetitive jobs or expected to abandon their careers after marriage or childbirth (2010). Much of this advancement for women came about because women pursued the dream of attending college and completing a degree. Many women pursue a college degree while fulfilling multiple roles, such as, mother, daughter, wife and/or care-giver. Attending college is a transitional and oftentimes stressful time for many students (Nguyen-Michel, 2006). The strain of serving in multiple roles only leads to more stress.

*Stress* is defined as the nonspecific response by the body to an environmental demand. Stress is what an individual experiences when the individual feels he/she does not have the resources to handle this demand.

### *Women and Stress*

The literature highlighting women and stress is not as plentiful as the research available on men and stress. The female stress research generally focuses on stressors experienced and ways to cope with these stressors. Most of the stress research available focuses on white middle class men and ignores variables specific to women.

Women do experience different stressors than their white, male, middle class counterparts. For example, women employed in male dominated careers have to deal with particular employment stressors, such as, gender-role stereotypes and occupational sex discrimination (Long, Kahn and Schutz, 1992).

Female police officers, for example, are exposed to the additional stress of being in a male dominated environment. Over the past 30 years, the number of female police officers has increased steadily. Despite this, women are still underrepresented in police work. In agencies with over 100 police officers, women represent only about 12% of the population. In small or rural agencies, they represent only 8%. In this male dominated profession, young women experience difficulties, such as, resentment from male co-workers, supervisors and administrators, negative attitudes/behaviors from citizens; lack of promotion and career progression. These problems can further be complicated by high levels of sexual harassment and gender bias. This gender harassment may contribute to increased levels of stress and job dissatisfaction. What is ironic about this situation is that there is a long history of women in policing dating back to the 19<sup>th</sup> century (Dowler & Arai 2008). A woman in this male dominated profession is nothing new; however, many view it as a new concept.

Another field where women have entered a historically male dominated field is in the military. Women began to enter the military during times of war, such as, World War I, as nurses and later in the administrative sector fulfilling bureaucratic roles. There are a few gender specific stressors that women in the military sector encounter. One is the harsh living conditions or environment that women may be subjected to (during training missions, combat or in camps). These environmental conditions can be highly uncomfortable, there is a lack of privacy and a certain level of promiscuity may be present (Nuciari, 2003). The second problem young women in the military face are maintaining their performance in a combat environment or with significant workloads where the conditions are magnified by the fact that young women are a small minority in

constant contact with the male majority. When the number of women in an organization, like in the military or the police force, is small women may view themselves as “tokens.” They may feel they are a part of the organization to fulfill a quota rather than because they are qualified to be there. This can lead to a host of other stressors, such as, performance anxiety, social isolation and role entrapment (Nuciarai, 2003).

Research conducted in 2003 did uncover additional stressors which are specific concerns for women. These stressors are: discrimination or being part of a minority group, an obvious lack of role models or support, role strain (having multiple roles at one time), being part of a dual career couple, pregnancy/motherhood and job displacement. With regards to discrimination, women in a male-dominated career will find themselves in the minority within their department or organization. Individuals who are in the minority can experience intense scrutiny and become the victim of biases and prejudices of the majority (Robinson, 2003). Others may question a female’s commitment to her work and her productivity- assuming she may quit work or significantly decrease her work hours after marriage or childbirth. Women may also be criticized for their appearance, viewed negatively for either being too attractive or too “unfeminine.”

Another stressor for women is the lack of role models or support within their organization. There are likely a limited number of women co-workers within these non-traditional careers therefore limiting the number of potential mentors. Some of the women in these other positions may not feel it is necessary to help other women. They may share the attitude that they had to work hard and/or struggle to be accepted by their male colleagues so others should expect to do the same.

Other stressors specific to women have been identified through research. These stressors include: role strain, being part of a dual career couple, pregnancy/motherhood and job displacement.

Role strain is the conflict that occurs when a woman is trying to manage and fulfill various role obligations, such as, employee and mother. Women, in particular, juggle various roles- they are mothers, wives, daughters and employees (Wider, 2009). The conflict between work and family roles may heighten this stress (D'Jonsson et al, 2003).

Being part of a dual career couple can cause stress. Professional women are more likely than professional men to have a full-time working partner (Robinson, 2003). The professional couple must decide how to handle the sharing of the household tasks. Unfortunately, many of these daily, tedious tasks are often left to the women (Robinson, 2003). As much as things have changed over the years, women still tend to do the cooking, cleaning and laundry (Wider, 2009).

Another stressor unique to women is pregnancy/motherhood. Women may feel that they need to choose between their careers or having children. A woman may fear that if she delays childbirth, she may have difficulty becoming pregnant. If she chooses to have a child at the beginning of her career, she may delay her advancement in the organization. She may be perceived as less dedicated and miss out on opportunities (Robinson, 2003).

A final stressor which I found tentative support for is the risk for job displacement. Because women account for almost all the growth in working hours and their presence in the workforce has increased, their risk for job displacement has surpassed the risk for

men (Hipple, 1999). This situation can be particularly stressful if the woman is a single parent or the sole bread winner in the family.

### *Students and Stress*

Attending college can be a stressful time for many students. Students have been the subject of numerous studies, including stress, for some time. For instance, college students and their drinking habits, attitudes, self image, health habits, financial literacy, age and mental health have all been studied. According to Misra and McKean, some of the stressors that students encounter are: finances, time management, information overload, academic commitments and self-image/appearance issues (2000; West & Russo, 2000; Lowery, Kurpius, Befort & Blanks, 2005). For female students this can be an even more stressful time than for their male counterparts. The literature suggests that stress makes it harder to complete college. Research indicates that young women face more resistance than males in the pursuit of college goals resulting in the need to overcome unique obstacles and challenges (Morales, 2008).

### *A Unique Group of Female Students at TSCT*

It is my belief that there is a unique group of female students enrolled in a two-year technical college environment at Thaddeus Stevens College of Technology (herein TSCT) in Lancaster, Pennsylvania who suffer from the stressors mentioned previously as well as additional stressors that their male counterparts do not experience. This group of female students is a group of women with strong personalities who consider themselves to be different from other women their age. Their interests include cars, fixing and building things rather than clothes, make-up or the opposite sex. Some of the

female students do take pride in looking feminine while still painting cars and building houses. Many of the female students dress differently than women in traditional female majors. They express their creativity through numerous body piercings, body art and non-traditional choices of hair color.

The young women who enroll at TSCT do so because they want to learn a skill in order to earn a living to support themselves and their families. They may have worked previously in minimum wage jobs or may have even been on welfare. Many of the young women who attend the college right after high school were encouraged by a parental figure, guidance counselor or social service worker to break the cycle of poverty and learn a trade where they can earn a sustainable living. This group comes from lower socioeconomic backgrounds and typically large high schools which do not have strong academic reputations.

This group of young women may be experiencing stressors typical of college students (i.e. finances, time management, information overload, academic commitments and self-image/appearance issues). They may also be dealing with discrimination from classmates or instructors because they are pursuing a male-dominated major/career i.e. plumbing, electrical, carpentry or machining; they may be experiencing additional stress because they are also working part-time while attending college; or they may be experiencing a lack of support from the college environment. This combination of stressors may lead to negative physical symptoms, such as, headaches, insomnia and changes in appetite (Robinson, 2003). Female students may also experience burnout- which occurs when emotional exhaustion and a reduced sense of personal accomplishment has set in. In general, it has been found that as an individual's stress

level increases their psychological well-being suffers and they experience an increase in anxiety and psychosomatic symptoms (Tetick & LaRocco, 1987; Gavin & Axelrod, 1977; Tosi, 1971).

Generally speaking the female population at TSCT consists of 70 students, 66% who are between the ages of 18 and 24 years old. The remaining students are non-traditional students who are 25 years of age or older who are returning to school to begin or retrain for a new career. Twenty eight of these 70 students live on campus; the others live with their parents or in off-campus housing with roommates or their children. All of the female students graduated from high school- no one obtained a GED. The racial make-up of this group is 53% minority and 47% Caucasian. 62% of the female students are receiving the Stevens grant and attend the college at no cost which means they come from depressed socioeconomic backgrounds. Their tuition, room and board is paid for by this grant as well as a yearly stipend for book and tools. The Stevens Grant was created by the founder of the college, Thaddeus Stevens. This grant was created so that students with financial hardship could attend college. Today, the grant funds a college education for approximately 425 students each year (or 50% of the total student population). TSCT is the only two-year college in Pennsylvania to offer this type of scholarship.

### *The College Environment*

The perception of a supportive college environment has been found to be important in the persistence of women in traditionally male dominated fields (Morris & Daniel, 2008). This is due to the fact that some women lack confidence in their abilities to be successful in college. According to a report by Hall and Sandler, some faculty do

treat women differently from men in their classrooms, often times inadvertently. Women may either be singled out or ignored due to their gender which then leads to a loss in their abilities and puts them at an educational disadvantage (Morris & Daniel, 2008). Female college students may find themselves at an institution with a *chilly climate* towards women. Overt examples of this *chilly climate* uncovered in Hall and Sandler's study include: sexual overtures towards women, making sexist jokes, disparaging women's intellectual abilities or choice of major, discouraging women's participation in class and making comments about a woman's appearance.

The environment at TSCT is a male dominated one. Ninety-one percent of the students are male. Male instructors teach in 16 of the 19 vocational areas. The few female instructors employed at the college teach in gender stereotypical majors: Architecture, Business and Mechanical Engineering. During my tenure at the college (14 years) female instructors have always been hired in these majors. Mechanical Engineering may not be seen as a major stereotypical of women; however this has been the case at Stevens. Mechanical Engineering is considered one of the cleaner trades and therefore acceptable for a female instructor. For the first time in the history of the college, though, a female instructor has been hired to teach in Plumbing.

This trend continues further up the line with the administration. There is one female vice president who oversees the finances and two male vice presidents who oversee academics and student services. These positions have historically been filled by males. At the director level, there are 10 full-time directors, 4 of whom are women, 6 who are male. There is one part-time female director. There is not as drastic of a difference between the male and female staff; however, the women are in stereotypical

positions, such as, Career Services, Library, Grant Writing, Developmental studies. My position is an unusual one for a female to hold. Most Admissions Directors are male. I am the second female director to fulfill this role. I was placed into this position after fulfilling the role as Acting Director of Enrollment for six months. The female who held the position before me was fired from the position. I had to prove I was capable of being successful in the position before I was officially named Director.

There is limited housing for the young women at TSCT. Presently, only 28 of the 70 young women enrolled can reside on campus. They currently occupy one floor at the branch campus which is located a ½ mile from the main campus. The college did previously have a Women's Center which was staffed by a part-time Women's Center Director. Upon her departure in 2002, the center has been staffed by a part-time intern (who is majoring in women's studies) from a local college. This occurred because of budget constraints. The programming and activities hosted by the Women's Center has diminished significantly since the Director's departure. This center had also been a place for the young women to meet and study. There are currently two athletic teams available to the female students- cross country and track and field. Previously, the college had an archery and a women's' volleyball team. These sports were eliminated due to budget cutbacks over the past several years.

As the Director of Enrollment at TSCT for the past ten years, I have seen numerous female students enroll in the college and successfully complete an associate degree while also juggling stress and the stressors mentioned above. This group of female students is a unique group in a unique environment. The overall female population at Stevens is 9%. Women began entering Stevens in 1980. The first women

to pursue a degree at the college majored in Machining. The Machining instructor at the time was so upset by a woman entering his major that he left the college.

Many of the female students enrolled at the college are first generation college students from lower socioeconomic backgrounds who are attending the college on a full scholarship. Moving into this middle class college environment can be a culture shock for these students. These students may not possess the cultural capital to understand and move through this middle class system with its various rules and expectations. They may be at a disadvantage when it comes to such topics as studying, utilizing campus resources or time management. Within their social class, education may be viewed as unnecessary rather than seen as a means of social mobility.

### *Significance of Studying Stress*

I first became aware of the significance of stress while employed at Lord Corporation in Erie, Pennsylvania in the early 1990s. Lord Corporation develops and manufactures adhesives, coatings and motion management technologies for the aerospace, defense and automotive industries. During my tenure, I encountered an Employee Assistance Specialist who worked as a consultant for this organization. His full time job was to monitor the employees stress levels and assist them in coping with their day to day stress. The company was in the process of moving some of their corporate offices, at the time headquartered in Erie, to Cary, North Carolina. He was very visible within the company and it appeared that the employees knew his role.

My interest in researching the topic of stress began in the fall of 1996 when I conducted a study of 83 employees from various companies in Erie, Pennsylvania. My intent was to measure the stress levels of employees at various organizations with

diverse backgrounds and occupations. This research was undertaken to determine the relationship between the threat of downsizing, the threat of relocation, level of responsibility, hours worked and organizational stress. A questionnaire was utilized to determine the above mentioned relationships as well as the relationship between external locus of control and outside stressors with organizational stress. The results of my study found no evidence to support a relationship between downsizing and relocation with number of hours worked or with outside stressors and organizational stress. Evidence did support a relationship between level of responsibility and number of hours worked.

For this study I explored a different direction from my past research and focused on female students in a two-year college environment and the stressors they are experiencing. The group of female students at TSCT is a special group of students in a special environment. They are enrolled in majors considered non-traditional career choices for women. They are also transitioning into a different culture- the middle class college environment.

### *Problem Statement*

The young adult female students enrolled at TSCT are a unique group of young women in a unique environment. Studying this group allowed me to identify which stressors they were coping with as students at the college. This group of students has never been studied before. A case study approach to this research project allowed me to explore the stressors these young women face in this two-year college environment and determine if they have the potential to influence their academic performance and eventual graduation from the college.

## *Goal*

The goal of this research study is to understand the stressors of the female students at TSCT and to develop a system to address these stressors with the end result being the matriculation and successful graduation of these students. The college administration is supportive of this research and is interested in finding out if stress is having a negative affect on academic performance.

## *Significance of this Study*

As a female college administrator employed within this unique two-year college environment at TSCT, it is worthwhile and useful to understand how this group defines stress and whether the stressors they experience are influencing their academic performance. If specific stressors are influencing the academic performance and/or departure of female students, research would be helpful in uncovering these stressors and determining ways to eliminate them (Archer, 1985).

This is an important study because when a female graduates from Stevens she begins her journey into a gold collar career. A gold collar job is one which is high in demand and offers a high salary. This presents a significant lifelong opportunity for women who traditionally may not have been the bread winner. A graduate of Stevens can support herself and her children on her salary. This presents a level of independence for these women. Many of the young women who attend Stevens receive the Stevens grant and attend the college at no cost. They graduate with no debt or student loans. Their education puts them in a position to be successful in the work world; another reason why it is so important that all those who start at the college graduate.

### *My Role*

In my role as Director of Enrollment I manage the recruiting efforts of the department as well as review the applications, high school transcripts and test scores of all the students who apply to the college. I interact with the prospective students prior to their enrollment in the college. Once they arrive for freshmen check-in in mid-August, the students no longer interact with the Enrollment department. Periodically, I may see the freshmen around campus throughout the school year. There is; however, no formalized relationship or the need for one between the students and me after they arrive for the start of classes.

### *Objectives of the study*

I have been working as the Director of Enrollment at TSCT for the past ten years. The college enrolls approximately eighty female students each fall semester who wish to complete an associate degree in a technical and traditionally male-dominated field, such as, automotive, carpentry, electrical, heating-ventilation air conditioning, masonry, welding and plumbing.

Based on anecdotal research, I assumed that the female students at the college were suffering from the stressors uncovered in the literature as well as others not highlighted. I was curious as to how the stress they experience influences their academic performance. With such a small number of students to start with, it was in the colleges best interests to determine what stressors were present, if these stressors were influencing their academic performance and if so, how they can be eliminated. The overall grade point average at the college for young women is 2.58. Since this grade

point average could be higher, I assumed that stress was exerting an affect. I made this assumption because the overall grade point average for the male students is 2.84.

My study had the following objectives:

Objective One: To uncover if the female students are experiencing stress and which stressors are prevalent among the young women at TSCT.

Objective Two: To determine if these stressors have an effect on their academic performance.

### *Research Questions*

Do the young women enrolled at TSCT experience stress?

If so, what stressors do they experience?

Does the stress affect their academic performance?

Can the stress be differentiated as personal, academic or human relation in nature?

### *Propositions*

P1: The young women enrolled at TSCT suffer from the following stressors: discrimination, lack of a role model or mentor and role overload.

P2: There are additional stressors that these students face which have not been uncovered or explored. These stressors were not revealed in the literature as this is a unique group of students in a unique environment. I am basing this proposition on anecdotal research.

P3: Those female students who persist do not appear to have academic performance problems.

### *Conceptual definitions*

In this research these words have been used in this manner.

Unique: in this setting, this refers to how few women are enrolled in this college environment. They are unique as a group because they makeup such a small portion (9%) of the overall student body.

Strong personality: this refers to the women enrolled at TSCT who by the nature of the environment they are entering must be somewhat self confident, assertive and independent.

### *Conclusion*

In conclusion, retention of the female students at Thaddeus Stevens College is an important endeavor. With a limited number of females enrolled, it is imperative that this group is retained and matriculates to graduation. This research allowed for the exploration of stressors within this population. It also presented an opportunity to determine if the stressors uncovered were influencing academic performance. Since this group has not been previously studied, this research is extremely useful and applicable.

## CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter will define stress, explore the historical background of stress, discuss stressors particular to female college students as well as role stress theory.

Seyle, the father of stress research, defines stress as a “nonspecific response of the body to a demand.” Stress is unique to each of us and can arise from emotional, mental or physical activity (Kopolow, 1991).

There are actually two different kinds of stress. Bad stress is the negative stress we are most familiar with. Good stress or *eustress* also exists. The difference between good and bad stress is that we have some level of control over the outcome of good stress. With bad stress there is no desirable outcome in sight and the individual generally feels negatively about themselves as well as trapped in a no-win situation. Since stress is perceived and defined by people differently, a person’s response to a stressful event can depend upon several things, such as, an individual’s beliefs, life experiences, personality, genetic factors and social environment (Bergdahl, 2002). When undergraduate women were asked how they perceive their stress level, they reported unacceptable levels of stress (Nguyen-Michel, 2006). Studies indicate that the majority of individuals feel that stress cannot be avoided and felt that little could be done to reduce it or even manage it (Kinman, 2005).

### *Historical background*

Since stress is such a broad topic, it is useful to have an understanding of the history of stress. Stress theory dates back to the early 1900s when Walter Cannon, a physiologist from Harvard University (1914) studied the nature of the animal fight and flight response. During the 1930s and 1940s, Hans Seyle, an endocrinologist from the

University of Montreal, followed up previous research by exposing animals to stressors that humans would seldom experience (plunges into ice cold water, toxic contamination). The first human stress research involved the return of soldiers from battlefield traumas during World War II and later the reactions of individuals to floods and fires. In the early 1960s, researchers began to include more frequent “stressors” in their research- death, divorce, job loss. However, the focus of stress research continued to include catastrophic stressors which could not be controlled by human intervention. The most prominent theme during all of this early research focused on how the individual coped with a large stressor. More recent research on stress has included the work environment where stressors to some degree, are controllable. The controllability of the stressor is an important new component to this theoretical stress model (Lazarus, 1984).

One basic and consistent element to stress theory is that the environment is the source or cause of stress and the individual is the target of the stress. Another common characteristic is the nature of the casual link between the environment and its effect on the individual. This is less easily determined than is usually true for the physical sciences or medical science. There may not be a single clear cause and effect link. In stress models many causes may accumulate to produce a single effect-stress. There is also a time delay between the cause and effect which is not seen in the hard sciences (Lazarus, 1984).

### *Prominent Stress Theories*

The most prominent theories of stress found in the literature are: Role Stress Theory, Person-Environment Fit Theory and the Transactional Process Model of Stress and Coping.

Role Stress Theory assumes that having one role as a student and one as a parent, daughter or employee is stressful. When fulfilling one role makes fulfilling another difficult, conflict occurs (Nordenmark, 2004). This role conflict can result in a negative attitude toward home or school life. (Kemery, 2006; Jonsson et al, 2003; Repetti, 1989).

A female student may experience stress as a result of having role overload or too much to do to fulfill her roles (Repetti, 1989; Verbrugge, 1986). According to the literature, role overload is usually greatest for mothers with young children, full-time workers and women in dual career couples whose husbands contribute little to household labor or childcare (Repetti, 1989).

The Person-Environment Fit Theory is also prominent throughout the literature. This theory states that stress is largely a result of a mismatch between a person's attributes (goals, behavioral style) and the characteristics of the environment (resources, demands, opportunities). An educational or home setting may be viewed as stressful if it does not provide the individual with the resources needed to achieve his or her goals (Ryska, 2002).

The Transactional Process Model of Stress and Coping states that an individual appraises situations as being relevant or irrelevant to their well-being, goals, motives, values and beliefs. If an individual's goals are threatened, stress will be perceived. Then

a secondary appraisal is made to determine what can be done in response to this stress. Events determined to be controllable are associated with coping efforts aimed at solving the problem (problem-focused) while situations determined to be out of one's control commonly require coping efforts intended to alter one's reactions or interpretation of the situation (emotion- focused coping) (Giacobbi, 2004; Zeidner, 1986). The Transactional Process Model views the stress and coping process as dynamic and ever-changing as the nature of the person/environment relationship changes. Individuals are constantly appraising and reappraising situations, which then influences how they cope (Giacobbi, 2004).

The Role Stress Theory is the theory that relates most closely to female students and is the one which I believe may have the most influence on their academic performance. Female students may be pursuing a college degree while also caring for small children, an ailing parent and/or working part-time. Female students may find it difficult to fulfill their role as a mother or caregiver while also trying to keep up with the rigors of homework and a full-time class schedule. Female students at this small college are in their technical classes for four hours each day, Monday through Friday, as well as 1-2 hours per day in academic classes. This allows little time for working or spending time on family responsibilities. Stress could easily develop for female students trying to juggle these academic, financial and family responsibilities. It is probable that this role stress would eventually affect academic performance. It is critical that a certain level of academic performance be maintained in order to graduate from the college with a degree. Therefore, this particular stressor can have a negative affect on a female students' success.

### *Current State of Practice*

The overall research on stress is vast. A search using the databases available through the EBSCO Host yielded over one hundred thousand articles on the topic. Stress has been studied from almost every imaginable angle. A general search yielded a significant amount of research on stress from an occupational standpoint. To refine my search I narrowed my focus to articles pertaining to stress and women. During my review, I only uncovered one study focusing on stressors specific to women. I then began to search for and review articles which included research on stress and college students. To further refine my literature review, I narrowed my search to articles highlighting stress and female college students. This helped me to uncover additional research which had been conducted on “stressors” specific to college students.

The one study I found which focused on stressors specific to women included female physicians and the consequences of the stress they experience. This research was conducted in 2003 by a professor at the University of Toronto named Robinson. She reviewed documents and data on the types of stressors affecting women physicians and the consequences of these stressors from 1988-2003. Even though it did not specifically reference female students, this article supports my hypotheses regarding the stressors that female students face. The stressors I mentioned, discrimination, lack of role models or support, role strain and pregnancy/motherhood were also uncovered in Robinson’s review of the literature on this topic. My review of the literature did reveal one study which researched the personal and academic stressors of students at a large, four-year university. This study found that for students, in general, tests, time demands, professors and the classroom environment were major

academic stressors. Students indicated major personal stressors as: intimate relationships, parental conflict and finance (Archer & Lamnin, 1985).

The academic stressors of time demands and classroom environment could also speak to previous stressors revealed i.e. role overload and discrimination. Demands on a female students' time can be a result of being a student as well as a mother, caregiver, wife or an employee. If the classroom environment within a major is one where discrimination is prevalent by other male students or by a male instructor this will result in stress for the female student. This article also revealed that excessive stress often interferes with learning and academic performance (Archer, 1985). This article presents some threads of support for earlier stressors I uncovered in the literature as unique to female students as well as the concept of stress influencing academic performance.

### *Female Students and Stress*

Through my review of the literature, I have identified the following stressors as unique to female students: discrimination, lack of a role models, role stress and self image/appearance issues.

For the purposes of this research I am defining discrimination as the disfavor that a female student may feel from other male students or an instructor. Female students, because they are in the minority, may experience intense scrutiny and become the victim of biases and prejudices of the majority (the male students, instructor) (Robinson, 2003). Female students may also be criticized for their appearance, viewed negatively for either being too attractive or too "unfeminine."

This stereotyping and discrimination can lead to isolation for female students. They may not be included in informal activities (hanging out after class or during lunch

in the Dining hall) which are good opportunities for bonding and sharing information (Robinson, 2003).

Another stressor for female students is the lack of role models or support within their major. There are a limited number of young women in non-traditional majors therefore limiting the number of potential mentors. Unfortunately, some of the young women in these majors may not feel it is necessary to help these students. They may share the attitude that they had to work hard and/or struggle to be accepted so others should expect to do the same.

A third stressor for women is role strain. Role strain is defined as a conflict between managing and fulfilling various role obligations, such as, student, employee and/or mother. Women, in particular, juggle various roles- they are mothers, wives and daughters (Wider, 2009). The conflict between school and family roles may heighten this stress (Jonsson et al, 2003).

A fourth stressor is self image/appearance issues. In national surveys young women have reported greater dissatisfaction with their appearance and bodyweight concerns (Lowery, Kurpius, Befort and Blanks, 2005).

The stressors mentioned do prepare female students for the perpetual stress they will experience in their future work environments. Coping with these stressors during their college experience will prepare them for the situations they will encounter in the workforce.

### *Good Stress*

The most significant difference between good and bad stress is that we have some level of control over the outcome of good stress. With bad (or negative) stress

there is no desirable outcome in sight and the individual generally feels bad about themselves as well as trapped in a no-win situation. Since stress is perceived and defined by people differently, a person's response to a stressful event can depend upon several things, such as, an individual's beliefs, life experiences, personality, genetic factors and social environment (Bergdahl, 2002). Individuals cite the nature of contemporary life as a stressor. People believe that the faster pace of life, greater pressure to achieve, a greater need for materialism and the loss of social support networks has led to an increase in their level of stress. Studies indicate that the majority of individuals feel that stress cannot be avoided and felt that little could be done to reduce it or even manage it (Kinman, 2005).

Seyle postulates that it is completely impossible to avoid stress but rather we should learn how to recognize our typical response to stress. Some individuals thrive on stress; Seyle calls these individuals "racehorses" while others, "turtles," prefer less stress and more peace. Individuals are really the best judge of whether their stress level is higher than usual. People can develop over time an instinctive feeling regarding which level of stress suits them best. Attitude, according to Seyle, determines whether we perceive any experience as pleasant or unpleasant and adopting the right attitude can change a negative stress into positive stress- or eustress (1978).

### *Conclusion*

A study exploring stressors specific to female students in a two year college environment is supported by a review of the current literature. This is a group previously not studied; therefore, this study will contribute to the existing literature on professional

women and stress by adding this new information on female students and the stressors they experience.

## CHAPTER THREE: METHODOLOGY

### *Introduction*

The young adult young women enrolled at TSCT are a unique group of young women in a unique environment. This group of students enrolls at the college to complete an associate degree in a technical and traditionally male-dominated field, such as, automotive, carpentry, electrical, heating, ventilation and air conditioning, masonry, welding and plumbing. As a female college administrator employed within this unique two-year college environment, it is worthwhile and useful for me to understand how this group defines stress and whether the stressors they experience influence their academic performance. I am also interested to learn if the impact of stress on academic achievement diminishes over time. I suspect that as the female students mature, learn to cope, or utilize campus services, the stress impact may decrease.

With only seventy female students currently enrolled, it was important to determine if stressors were present and if they were influencing academic performance. The overall grade point average for the young women as a group is 2.58. Since this grade point average is lower than the male students' average of 2.84, I felt confident asserting that stress was playing a role.

Since I am interested in understanding the experiences of this group of female students, a qualitative case study methodology was chosen. Patton (2002) postulates that qualitative methods allow researchers to study issues in greater detail. I conducted two focus groups in order to collect data. By using open-ended interview questions, this allowed me to understand the female students' college experience in their own words. For several reasons, which I will outline later, the focus group approach was chosen.

Because there are only 70 female students enrolled at the college, all of the students were contacted and given the opportunity to participate in the focus group sessions. I recruited female students to participate through the use of email and campus flyers. Students were offered an incentive for participating and all female students were eligible. This group self selected based upon who volunteered for the study. Upon completion of the focus groups, I analyzed the transcripts and segmented the phrases into different categories. Upon completion of this content analysis, I had a better understanding of the stressors this group has experienced and was able to determine if these stressors were affecting their academic performance.

#### *Rationale for Qualitative Methodology*

Because it is believed that young women are facing stress in the college environment, it is important to understand their experiences in their voice-providing support for the use of qualitative methods. This study explored female students' experiences at TSCT and in particular any stress they were experiencing. By providing an in-depth understanding about female students enrolled at TSCT, college administrators can make more informed decisions about additional services needed and the challenges of retaining female students in this environment. This qualitative approach provided "rich insight" into the experiences of the students (Guba & Lincoln, 1994).

According to Patton, qualitative research is really the only way to understand how the female students perceive, understand and interpret their world (2002). The female students involved in this research study became my "panels of experts" when it came to understanding the setting at TSCT where they are pursuing degrees.

There are several reasons that the use of focus groups was chosen for this study. First, with focus groups the interactions among the participants enhanced the quality of the data. In focus groups, participants also provided checks and balances on each another which helped to weed out false statements or extreme views (Kruger & Casey, 2000). For example, a participant made a statement which others quickly noted was not a true statement for them. This one statement was seen by the others as a more extreme view. I felt as though the other participants were quick to verbalize their agreement or disagreement about a stressor mentioned.

Second, with the use of focus groups, it became apparent rather quickly whether a consistent view of the topic at hand was shared or whether there was diversity among the groups outlook. Third, focus groups were also enjoyable for the participants since they are social in nature. The participants in this research study were college age and college students tend to be social by nature. The focus group setting was actually rather natural for this group since they most likely gather together on campus to socialize and chat about their lives. Last, this data collection method was cost effective. Over the course of several hours, I was able to gather information from a group of people rather than just one (Krueger, 1994).

Because focus group research is a “collective rather than an individualistic research method,” focus groups have emerged as an empowering approach in feminist research (Madriz, 2000). The female students in this research study may have found the one-on-one interviews to be intimidating or even scary. The focus group approach offered a safe environment in which to share their ideas, beliefs and attitudes from a feminist perspective. Since this study involved gaining perspective into female students’

experiences in a two-year technical college which is dominated by male students and instructors, the focus group approach made the most sense.

Finally, the ontological perspective for this study lent itself to qualitative inquiry. I believe that the construction of reality is socially based on the experiences of the individuals. Kraus (2005) asserts that qualitative methodology assumes that there is not one reality, but realities based on the perceptions of individuals. This study used a subjective epistemology (Guba & Lincoln, 1994) because I was interacting with the participants to understand their story. Because the purpose of the study was to explore and understand the experiences of female students enrolled in a two-year college environment, it shared a constructivism framework.

### *Overview of Research Design*

This research utilized a case study approach to study the stressors affecting older adolescent young women enrolled in a two-year college environment. This case study was a single case design which explored and described the stressors revealed through a qualitative research approach. This was an appropriate approach because this population represents a unique circumstance-young women enrolled in a two-year college environment where they are the minority. This population also represents a revelatory case because this group has not been studied from a social science perspective in the past. This small group of female students at TSCT was considered the unit of analysis in this study. There were approximately seventy female students enrolled at the college at this time.

After proposal approval, I sought IRB approval to proceed with this study. Potential participants for this study were solicited by distributing flyers on campus and

by sending a mass email to the female students from the Student Services Department. As students expressed interest, they contacted me (the researcher) to be assigned to a focus group. I sent out the email and posted flyers in late February 2011. I asked the students to respond by mid-March if they were interested in participating. I conducted the focus group sessions in mid-late March 2011. At this point in time the female students had experienced at least two challenging semesters of college and any potential stressors would have likely surfaced. This was an ideal time to gain a deeper understanding into the stressors that the participants had experienced.

#### *Research participants*

The female population as a whole was studied at TSCT. This was feasible because there were only 70 female students currently enrolled. All female students were eligible to participate in this study. TSCT was selected for this study because of the female population enrolled in technical, male dominated majors. The researcher recruited female students to participate in this study, however; the group self selected based on who volunteered. Although the participants were students at TSCT, the participants were not homogeneous in terms of race, socioeconomic status, academic preparation, major or hometown.

#### *Demographic survey*

I used a self administered questionnaire to collect demographic information consisting of age, ethnicity, housing status (on-campus or off-campus), marital status, work experience, children, hometown, and expected grade point average for that

particular semester and other extraordinary circumstances to have a better understanding of the study group.

### *Focus group discussion*

I used focus groups to gather data regarding stress associated with educational experience. Focus groups are commonly used in sociological research (Morgan, 1996). In general, young women tend to be more introspective than men and will oftentimes offer more thoughtful responses. This held true for the participants at TSCT. They were open to discussing their experiences at the college.

For practical purposes I had a “practice” focus group session, prior to the mid-March focus group sessions with the students, consisting of some individuals from the college who have taken an interest in my study. This “practice” session helped me with question refinement, allowed me to practice reading body language and cues and helped me feel more at ease with certain logistical items, such as, recording the data and obtaining the consent forms.

For the purpose of this study, I conducted focus groups with 6-8 participants in each group. I offered three different focus group sessions to accommodate the female students and their busy schedules. The focus group sessions took place from 11:30am-12:30pm, during the student’s lunch period. To encourage the students to take time from their busy schedules to participate, I offered each participant lunch and two community service hours for participating.

I used a semi-structured focus group approach with open-ended questions intended to develop dialogue and conversation with the group. Following the focus group, participants were encouraged to email any additional thoughts to me. This

allowed participants to add any additional comments that they may have thought of afterwards or any comments they may have felt uncomfortable sharing with the group. I did not elicit anymore data from the participants.

#### *Recording the data*

For this study I recorded the focus group sessions. I then had a professional transcription company transcribe the sessions. All names were removed from the transcripts. Each participant was identified by number. I notified the participants prior to signing the informed consent form that I would be recording the discussion. The audio files were destroyed once the transcripts were completed. The transcripts are being stored in a locked cabinet in my home office and will be stored there for three years.

#### *Data Analysis and Syntheses*

For the data analysis and synthesis process, I segmented the data and phrases and generated different categories. I printed out the transcripts and cut them up with scissors into various pieces. I created piles of papers which I could then categorize. I examined the data for any trends or themes which developed during the focus group discussions. I coded the data based on the stressors revealed in the literature and during the focus groups. Themes arose that encompassed personal and human relations stressors. For example, personal stressors revealed included: interpersonal relationships, housing status and attention from male students. Human relation type stressors included: being part of a minority group, interacting with the male students and negative reactions from classmates and employers.

### *Ethical Considerations*

To ensure that this study was conducted in an ethical manner, there were several areas to consider. First, it was important to consider the confidentiality of the participants. At the start of the focus groups, I explained that confidentiality was expected and that the findings would only be used as aggregate data. No one particular student would be singled out based on her comments. I was also vigilant in obtaining a signed informed consent form from each participant.

Second, I explained the purpose of the study, the type of information being collected and how this data would be used. It was important that the group understood that their feedback would lead to improved services for them and future female students. Coercion was not a concern because the participants were volunteers and their participation was optional. I shared with the students my role at the college and that I have worked there for a number of years. In my position I have no power over the students or their success at the college. There was no benefit or disadvantage to participating in this study with me as the researcher. There was no risk associated with answering the questions I have generated regarding their experiences at the college.

Third, to foster trustworthiness, I offered the participants an opportunity to review my findings for accuracy and credibility. I emailed the participants to inform them when the transcripts were ready for review and asked them to come to my office to review if interested.

Fourth, I acknowledged my own biases with regards to which stressors I believed would be uncovered during this research. It was important that I recognize that I grew up in a different social class than some of the participants. I grew up in a middle class

environment where social resources were readily available. The female students who attend TSCT have not all have come from this same environment. What I might have considered to be a stressor for them may not have been. Likewise, what they were finding to be stressful, I may not have.

#### *Dependability*

I conducted an audit trail that details how the data was collected and analyzed to improve dependability. According to Patton, this assisted with the rigor of my study and help with the accuracy.

#### *Transferability*

Although not usually generalizable in terms of random sampling, qualitative research can be useful in other settings (Patton, 2002; Hossler et al, 1999; Bloomberg & Volpe, 2008). Transferability refers to the study's ability to provide understanding of the processes at work that may be helpful to others in communities and settings. To improve transferability, I have included rich descriptions to provide an understanding of the students' experiences.

#### *IRB Approval*

Following approval of this proposal, I submitted this proposal to the IRB for approval of the processes, sampling method and treatment of the participants. These procedures adhered to the standards of treatment for human participants including informed consent and confidentiality. To protect the participants, an informed consent form was completed and signed by each student. This form explained the purpose of this study and any risks associated with participating. This research was conducted openly so that the purpose of this study and the questions would be transparent to the

participants. I also explained, through the use of an informed consent form, that there were no known risks or advantages to participating and that their responses would only be used in conjunction with other responses. I also acknowledged that I would be recording the focus group sessions for ease of transcription. The transcription of the focus group dialogue was completed by a reputable company that requires confidentiality. Finally, I will retain the data for three years in a locked drawer. The audio files were destroyed after transcription.

Because this research occurred at a college where I am employed, I submitted a written request to the Vice President for Academic Affairs for his approval to conduct the study. Written approval to proceed with this research was granted by the Vice President of Academic Affairs.

#### *Limitations of the Study*

This study is limited based on the scope of its sample and sample selection. A significant limitation to this study is that the sample comes only from one college and one type of college- a technical college. The research is limited to understanding the female students that attend this particular two-year technical college. This may make it difficult to generalize the results to a large population of female students at a four-year. The young women studied are in a unique climate as well; one that may not exist at other colleges particularly four-year schools who traditionally offer a variety of liberal arts degrees.

This study also only used a qualitative research technique, a focus group, which may also limit the data. According to Patton, the focus group as a data collection method has some limitations (2002). Research suggests that focus groups appear to

work best when the participants do not know one another. In the case of this study, the participants all attend the same college so they have most likely already established varying relationships with one another. The dynamics may have been different since the participants already know one another. Another disadvantage of focus groups is that they generally occur outside of the natural setting where social interactions occur. However, in the case of this study the focus groups occurred on campus in the Multicultural Affairs Center- a spot where female students would typically convene to relax and talk with one another.

The number of questions the researcher is able to ask is limited in this group setting. The amount of time for any particular participant to respond is limited due to their being many individuals who need to respond. As the researcher, I only expected to ask approximately six to eight major questions with an hours' time for the focus group.

Also, participants who may have realized that their perspective may have been in the minority may not have spoken up because they may have feared negative reactions. I accommodated for this by trying to draw out participants who were particularly quiet by asking them such questions as: "How did you react? Or "What did you think after this happened?" The moderator of a focus group must be skilled enough to know how to facilitate this process. I needed to be careful that one or two participants did not dominate the discussion. I wanted to draw out those students who are not necessarily as verbal so that their views could be shared.

Confidentiality cannot be guaranteed during the use of focus groups. I explained to the participants that what was discussed during the focus group session was not meant to be repeated outside of that setting. I also asked participants to respect the

comments of others in the group. I did not want individuals who realized that their perspective was in the minority to fear a negative reaction from others or to be concerned about confidentiality. I have received no feedback from the students to indicate that their confidentiality has been affected.

Finally, this study was limited by the researcher's biases and experiences which included working in this male dominated campus.

### *Delimitations of the Study*

The study was delimited by using a group of female students at a small technical college in Lancaster, Pennsylvania. The data was collected during the spring 2011 semester. The focus groups took place on the campus of the two-year technical college chosen.

### *Conclusion*

In conclusion, the use of focus groups allowed for the confirmation that stressors are present for the female students enrolled at Thaddeus Stevens College. Focus groups also presented an environment where a discussion surrounding these stressors could occur. An in depth understanding of these stressors was afforded to the researcher by utilizing this research design.

## CHAPTER FOUR: FINDINGS

This chapter will include the purpose of my research, a description of the data, and results of the focus group sessions as well as how the results relate to the stressors uncovered in the literature review.

### *Purpose*

The purpose of this research was to determine if the female students enrolled at Thaddeus Stevens College are experiencing stressors and if these stressors are influencing their academic performance. The female students enrolled at TSCT are a unique group of young women in a unique environment. This group of students enrolls at the college to complete an associate degree in a technical and traditionally male-dominated field, such as, automotive, carpentry, electrical, heating, ventilation and air conditioning, masonry, welding and plumbing.

Several stressors, unique to female college students, were uncovered during the literature review phase of this study. These stressors included: discrimination, lack of role models, role stress and self image/appearance issues. I was curious to determine if any of these stressors would surface during my discussions with the female students. I also hoped to discover some recommendations for change that the college could incorporate into future programming as well as some advice for incoming female students entering this unique college environment.

The purpose of this study was to address the following research questions:

Do the young women enrolled at TSCT experience stress?

If so, what stressors do they experience?

Does the stress affect their academic performance?

Can the stress be differentiated as personal, academic, or human relation in nature?

### *Data Description*

The data from this study derives from the focus group sessions conducted in March 2011 in which thirteen female students volunteered to participate in an hour long session to share their experiences as a female student enrolled in a technical college environment. All of the students who participated are enrolled full-time at the college and are nearing completion of their first or second/final year at the college. The participants are enrolled in a variety of majors including carpentry, collision repair, architecture, respiratory care and graphics. Many of the students are the only female student in their major.

The mean age for the participants was 21 years of age and over half were Caucasian. The majority of the students in the focus group sessions are commuters and are single. Seventy-five percent of those who participated are working part-time while attending Thaddeus Stevens College. Most are working between 20-30 hours/week. Only two of the participants have children. Most predicted that their grade point average for the semester would be a 3.0 or higher. Those who are working more hours at a part time job predicted a lower grade point average.

Table 1: Demographics of Respondents

<b>Demographic Variable</b>	<b>Value</b>
n=13	
Mean age (years)	21
Ethnicity: Caucasian	54%
Hispanic	30%
African-American	8%
Asian	8%
Resident students	38%
Married students	15%
Employed students	100%
Students with children	15%

With regards to the focus groups, eight students signed up to participate in the first session held in mid-March over the student's lunch period at the college. Six students reported and participated in this session. Nine students registered for the second session and seven participated. I advertised a third focus group to occur in early April. I was hoping to increase the overall number of participants. With a participation rate of 13 of the 60 potential participants, this was a 21% participation rate. Only two students signed up for the third session and neither student showed up to participate in the session. Earlier I mentioned that there were seventy young women enrolled at the college. This data was derived from the December 2010 enrollment numbers. At the start of the spring 2011 semester, a total of 60 young women were enrolled. Ten young women were dismissed or withdrew over the winter break.

As I was advertising these focus group sessions in late February, I noticed that the number of young women enrolled in the college dropped again by 21%. The number dropped to 47 young women enrolled. Realistically, I could only expect a total of 47 potential participants. This changed my percent of participation to 27%.

As I was concerned about this decrease in enrollment during a six week timeframe I decided to contact these 13 students by telephone to inquire as to why they withdrew. I suspected that one major reason that several withdrew was due to a decision made by the college to suspend the Respiratory care program. This decision was made because the college was having difficulty obtaining clinical sites and post-graduate employment for the students. I assume that this created stress for the students; therefore, they would have withdrawn. This was true for several of the students I spoke to.

One student in particular was extremely vocal about the situation and shared how the stress became too much for her. She was not eating or sleeping; she was experiencing heart palpitations and was crying constantly. All of these are classic symptoms of stress. She withdrew because she felt that she could not excel in this type of uncertain environment. She referenced how unstable the one professor was. Unfortunately, once the decision to suspend the major was announced the program director left the college. This left the students with only one instructor who began to leave class early to attend job interviews. This is a rather unique situation and is an unusual stressor. This is not a stressor I expected to uncover; however, the timing of this decision created a challenging situation for this group of students. Subsequently, five of the thirteen students did withdraw for this reason.

Another student from this group of thirteen shared with me that she withdrew because she found out that she was pregnant. Due to this she had to stop taking her ADHD medication. She plans to return to the college after the birth of her child and continue pursuing her degree in Architecture. Another student who was also enrolled in

Architecture withdrew due to child care issues. She was having difficulty obtaining a consistent and stable child care provider.

Two young women who were enrolled in general academic classes withdrew from the college; one to join the Navy and study nursing and another to relocate to Florida. The remaining students did not return my telephone calls. However, I was able to obtain reasons for their departure from the Registrar's Office. These four indicated that they left due to difficulty with their general education classes. Oftentimes, students will withdraw from the college prior to receiving a failing grade in their courses.

### *Focus group results*

I designed interview questions to prompt the female students to talk about their experiences at Thaddeus Stevens College in order to determine if there were particular stressors which affected their persistence at the college. As participants reflected on their college experience, their responses took shape in the form of stories and memories. From these, several short term, long term and common stressors emerged. I would also categorize these stressors as personal and human relation in nature. I suspected I would uncover stressors that fell into these secondary categories; I did not expect that some stressors would be short or long term in length. I did not find this delineation in the literature I reviewed.

In order to understand how these stressors affect the female students at the college, I purposefully organized the data into three overall categories- short term, long term and common stressors. Within these categories, the stressors are also subcategorized as personal, human relation and academic stressors. Organizing the data in this fashion will be useful to the college under study as well as other colleges

who serve a small female population. Also, counselors, advisors and the women’s center intern can use this information throughout the semester; focusing on the short term stressors early and the long term stressors later in the semester and during future semesters.

Table 2: Stressors

	Short Term Stressors	Long Term Stressors	Common Stressors
<b>Personal and</b>	Minority group	Attn. from males	
<b>Human Relation</b>	Interactions w/ males	Housing status	
	Negative reactions from classmates	Interpersonal relationships	
	Negative reactions from employers	Strict Rules	
		Discrimination	
		Lack of support	
<b>Academic</b>			Information Overload
			Time Management

*Short term stressors*

I will address the short-term stressors first. Short-term stressors are those identified by the female population as occurring for a limited amount of time. These are stressors that the female students are able to cope with rather successfully. These stressors do not appear to affect their academic performance at the college.

Four factors emerged as short-term stressors. These factors all fall into the category of human relation as uncovered in the literature review. These four stressors are:

1. Interaction with male students. The female students defined this as how to interact with all the male students and what to talk with them about.
2. Being part of a minority group. This is defined as being the only female in a major or a particular class. Participants indicated that they “get used to it after a while...” “At first, it is really nerve-wracking...” “At first, you feel so awkward, but

then by the end of the year, it doesn't really matter anymore, you are all just the same, just one big group of friends.”

3. Negative reactions from male classmates. Some students experienced male students taking bets on how long a female student would persist in a major. One student shared, “I know one guy who lost \$20 already because I lasted...” This experience was not common in every major- mostly in the construction majors. This may depend upon cues from the professor. Other young women in different majors did not share this experience.
4. Negative reaction from a prospective employer. Participants shared that they were interviewed by a company because the company felt obligated to interview the female students even though they were not planning on hiring a female. Based on this experience, a big question on their mind was: Will I find a job?

### *Long term stressors*

Long-term stressors are those identified by the female population as consistently occurring throughout their college experience. These stressors have the potential to affect one's retention at the college as well as academic performance. These stressors are specific to being a female student enrolled in a technical college environment. These stressors are also considered to be personal and human relation in nature. Six long-term stressors were identified. These stressors are:

1. Attention from male students. According to the participants, “Too much attention from the male students” “Male students may whistle at you or yell out an inappropriate comment to you.” Male students hit on you because you are female (and there are so few), “Has nothing to do with anything about you...”

It seems as though this group of students has developed their own “culture” within the college. They have established certain code words for describing what happens to some of the young women when they experience this overabundance of attention from the male students. Students referred to the “Stevens Syndrome” where young women take the attention from the male students too far and become intimate with the male students. This leads to the young women developing a reputation, being called names and being talked about in a negative manner. Participants voiced their concern that the “Stevens Syndrome” has led to several of their friends withdrawing from the college. “Girls kind of lose it, especially when they are not used to all the attention and the freedom from their parents...”

2. Housing status – Participants indicated that commuting to campus is less desirable than living in the residence halls. “You do not meet as many people by commuting to the campus.” “You do not have a connection with the other young women.”
3. Interpersonal relationships. Female students mentioned that they experience jealousy from current boyfriends who do not attend Stevens because the young women are surrounded by male students all day.
4. Strict rules. The strict rules for attendance and for residing in the dorm were noted as a stressor. Female students mentioned being questioned about their whereabouts on the weekends. One mentioned that she can “connect more with friends in military colleges with their strict rules and stuff then with friends in

normal college...” The female students feel that though this is a transition time “but the instructors act as though it is the real world.”

5. Discrimination. Discrimination was mentioned in the form of test questions being marked wrong that were correct and being ignored by a professor when asking for assistance. This group feels as though they attend the “good ole boy” college because they see favoritism being shown towards male students.
6. Lack of support. The young women mentioned that “there is no one to depend on if you live in the residence halls. The Dorm personnel leave at 1:00am.” “There’s no one responsible for these girls except for themselves 24 hours a day...”, “You have to find your own support...”

#### *Common stressors*

Third, I will address the common stressors which were discussed during the focus groups. These are stressors which the participants felt were not specific to Thaddeus Stevens College but rather would pertain to all female college students. These stressors are considered academic in nature. The two common stressors uncovered were:

1. Information overload. Students mentioned instructors missing several hours of lab time and then expecting the students to make up the work they missed (students are not permitted in the lab when the instructors are not present).
2. Time management. Specifically, working too many hours at an after school job. Students mentioned having to cut back on the number of hours they were working to keep their grade point average up.

#### *Academic performance*

At the start of this study I noted that the overall grade point average for the female students enrolled at the college was 2.58. At this point in time, there were 70 female students enrolled. This was lower than the overall grade point average of the male students which was 2.84. Based on this difference I felt confident that the female students' academic performance was being affected by stress. After conducting the focus group sessions and learning of some of the discrimination occurring by instructors, I became concerned that perhaps the male students' grades were being inflated due to favoritism. I contacted the Registrar at the college and obtained the overall grade point average for the 47 women who were still enrolled at the end of the spring 2011 semester. The overall grade point average at this point in time was 3.37. Therefore, I could conclude that the grades of the remaining students were not negatively affected by the stressors noted. I also asked the Registrar to determine the overall grade point average for the students who withdrew during the spring semester. This group had an over grade point average of 2.50. It appears that the students who withdrew prior to the focus groups exhibited poor academic performance which was lowering the overall grade point average.

#### *Stressors and review of literature*

Several of the stressors which emerged during the focus group sessions were uncovered during the literature review phase of this research. These stressors were: discrimination, lack of a role model and self image/appearance. The stressor, discrimination, emerged as both a short and long term stressor. From a short term perspective, the female students find being part of a minority group stressful initially. After several weeks they do adjust to this situation and feel more accepted by their

classmates. From a long term perspective, some of the young women do feel that the instructors demonstrate behavior that is discriminatory, such as, marking test questions as incorrect when they are correct and ignoring students who are requesting assistance during class.

The stressor, self image/appearance, was identified by the literature and did surface during the focus group session. College is a time when students are especially vulnerable to pressures and attention regarding physical appearance. One's self identity and self worth began to develop based on the reactions of others to ones' appearance (Grossbard, Lee, Neighbors, Larimer, 2008). The students mentioned continuously how much attention they receive from the male students. This attention, in the form of whistling and being "hit on", has continued throughout their college experience. They seem to recognize that their self worth is not tied to this attention. They realize it is going to occur because there are so few of them. Therefore, they dress casually so as not to draw any extra attention to themselves. It was mentioned, though, that the attention can be positive because it boosts your self image and makes you feel good about yourself. Unfortunately, those young women who experienced the "Stevens syndrome" and withdrew were not able to put this stressor into perspective.

There was tentative support for the stressor, lack of a role model, based on the focus group research. The participants mentioned a lack of support as a stressor. They felt they were basically "on their own" after a certain time in the residence halls and had to seek out their own support system. In some cases this was through one another. The women's center and the intern who oversees the center have been a

source of support; however, over the years the hours and services provided have been reduced. The students inadvertently were mentioning the need for a role model to guide and support them through this college experience.

Three prominent stress theories were noted in the literature review- Role Stress Theory, Person-Environment Fit Theory and the Transactional Process Model of Stress and Coping. As noted earlier I expected that Role Stress Theory would emerge as the most significant of the three theories during this research. However, this did not occur. This could be due to the fact that this group of students is not juggling numerous roles. First and foremost they are students; most are working only part-time and only two of the thirteen participants have children. Only one student mentioned an unusual circumstance in her life; she was homeless during her early high school years. Role stress does not appear to be a stressor for this particular group of students.

I was reminded of the Person-Environment Fit Theory when reflecting upon the young women who left the college while I was advertising the focus group sessions. For this group of students, the educational setting presented a stressful environment (lack of a consistent instructor, lack of child care services) because the college did not offer the resources needed to complete their degree.

The Transactional Process Model of Stress and Coping is a prominent stress theory which could be seen with this group of young women. The young women enrolled at the college are appraising their environment and situations to determine if they are threatening in any way to achieving their goals. Initially, they have felt that some situations, such as, an abundance of male attention or the lack of a role model could

have been viewed as making their goal more difficult to achieve. Situations that the female students cannot control (attention from the male students) require determining ways to cope. One way they cope is by dressing very casually so as not to draw attention to themselves. They have also learned to rely on one another for support especially if there is not another female student in their major. Rather than viewing this as stressful and allowing this to affect their goal of obtaining a degree, they have created a small support system to encourage one another.

It appears from this research that the stressors specific to the young women enrolled at Thaddeus Stevens College are not academic in nature. Rather, the stressors that they are experiencing are more personal and coincide with the stressors uncovered in the literature review; one exception being the amount of male attention.

#### *Similarities between this study and previous ones*

This study reinforced the similarities between the environment that the female students are in at TSCT and the male dominated environment that young women in the military and law enforcement experience. Research indicates that female police officers experience resentment from male co-workers and supervisors. This stressor was also prevalent among the female students at the college. They had experienced resentment from male students and some instructors; mostly those in traditionally male dominated fields.

A lack of career progression is another difficulty that women in law enforcement face. The early stages of this stressor surfaced during the focus group sessions. Female students had experienced some negative feedback from potential employers during the annual job fair on campus. Some employers indicated that they only

interviewed the female students because they felt an obligation; rather than because they were interested in hiring a female. This type of attitude could lead to problems with career progression in the future.

Women in the military experience specific stressors that their male counterparts do not; for example, they are in the minority. This is the same situation that the female students at TSCT face. Being part of a minority group can also lead to discrimination; which surfaced as one of the stressors for the students. Due to being part of a small group on campus, there are not as many other young women to turn to for support; a situation which also parallels young women in the military or law enforcement. This lack of support can create a stressful environment for young women.

Reflecting on the concept of stress theory, which states that the environment is the source or the cause of stress, this research study reinforced that many of the stressors uncovered are a result of the environment present at the college. The environment is a male-dominated one which places the young women in the position of being part of a minority group. This has led to an overabundance of attention from the male students; which was noted as a long term stressor. Because of this environment, the young women have also experienced discrimination from some of the male students and instructors. Not everyone has embraced the idea of young women holding jobs as carpenters or automotive technicians.

### *Conclusion*

In conclusion, I was able to determine from the focus group sessions that the female students enrolled at Thaddeus Stevens College are experiencing stress. A total of ten stressors were identified by the participants- some playing a short term role and some

long term. These stressors have affected their experience at the college. However, these stressors have not had a significant enough impact that their grades have suffered or they have withdrawn. They have found ways to cope and have persisted. Their goal of completing a degree and graduating is foremost in their minds. None of these stressors had affected the students' grade point average. The number of hours spent working (thus less time for studying) appears to be the only factor that impacted grade point average. The participants recognized this and made adjustments.

## CHAPTER FIVE: DISCUSSION

This chapter will include a summary of the research findings, recommendations for college administrators and suggestions for future research.

### *Purpose*

The young women enrolled at TSCT are a unique group of students in a unique environment. This group of students enrolls at the college to complete an associate degree in a technical and traditionally male-dominated field, such as, automotive, carpentry, electrical, heating, ventilation and air conditioning, masonry, welding and plumbing. The purpose of this research was to examine the following research questions:

Do the young women enrolled at TSCT experience stress?

If so, what stressors do they experience?

Does the stress affect their academic performance?

Can the stress be differentiated as personal, academic or human relation in nature?

Earlier I proposed that the young women enrolled at TSCT were suffering from discrimination, lack of a role model and role overload as well as additional stressors which were not revealed by the literature review. I also expected that the stressors experienced by these young women would have an impact on their academic performance. I was able to successfully answer these research questions and find support for my propositions by conducting focus groups with the female students enrolled at the college.

To reiterate, Proposition 1: The young women enrolled at TSCT suffer from the following stressors: discrimination, lack of a role model or mentor and role overload. The young women enrolled at TSCT suffer from the stressors discrimination and lack of a role model; however, role overload is not a factor. This could be due to the fact that this group of students is not juggling numerous roles. First and foremost they are students; most are working only part-time and only two of the thirteen participants have children.

Proposition 2: There are additional stressors that these students face which have not been uncovered or explored. These stressors were not revealed in the literature as this is a unique group of students in a unique environment. I am basing this proposition on anecdotal research. Additional stressors were uncovered through this research which were not revealed in the literature, such as attention from the male students, interpersonal relationships, strict rules and housing status.

Proposition 3: Those female students who persist do not appear to have academic performance problems. For the 47 women who were still enrolled at the end of the spring 2011 semester, their overall grade point average was 3.37. Therefore, I can conclude that the grades of the remaining students were not negatively affected by the stressors noted.

### Summary

The research conducted focusing on the female students enrolled at Thaddeus Stevens College uncovered several short and long term stressors which they are experiencing. The short term stressors occur during the first few weeks of school and then subside as the students successfully cope with them. These included such stressors as: interacting with the male students, being part of a minority group and

negative reactions from classmates and employers. These stressors are not affecting their academic performance or their persistence at the college.

Several long term stressors were revealed during this research. Long term stressors occurred consistently throughout their enrollment. These stressors included: too much attention from male students, living arrangements (on-campus vs. off-campus), interpersonal relationships, strict campus rules, discrimination and a lack of support. These stressors, being more significant in nature, have the potential to affect academic performance and persistence. Fortunately, for this group of students, they were not negatively affected by any of these long term stressors.

### *Limitations*

One limitation is that the female students at one, small technical college were studied. Future research should include studying young women at several different technical colleges. Thaddeus Stevens College of Technology was chosen because of its unique environment. Additional colleges would need to be evaluated to determine if they meet this criteria.

Another limitation was the decrease in the number of potential participants while the focus groups were being advertised. The potential for larger or more focus group sessions was evident at the beginning of this study. As time progressed and more young women withdrew from the college, the group of eligible participants dwindled. This decreased the amount of information I was able to gather.

### *Recommendations for college personnel*

Several recommendations by the female students surfaced during the focus group sessions. These recommendations were suggested because these young women felt that if the college utilized these ideas it would help with retaining female students as well as increase the number of female students overall. These recommendations are as follows:

1. Add another major that would attract more female students i.e. Culinary Arts, Criminal Justice
2. Utilize specific advertising targeted towards prospective female students i.e. a brochure designed specifically for prospective female students
3. Have female students lead the campus tours so that they can offer a “female perspective” or have a female student designated in each major to speak to tour groups.
4. Have more activities both on and off campus for the young women to participate in
5. Incorporate the concept of sexism into the diversity training offered to all freshmen during the orientation week
6. Have a Meet and Greet Luncheon during orientation week so that all the female students can meet one another
7. Establish a mentoring program- second year female students would mentor a first year student- this would give the freshmen another student to talk to who could offer a word of encouragement.

### *Discussion with college administration*

I shared the stressors that were uncovered with the Vice President of Academic Affairs at the college, Dr. William Thompson. We discussed the various stressors and he expressed his support for making improvements to alleviate these stressors. We determined, through our discussion, that eliminating some of these stressors entirely is not a realistic goal. For example, because the male population will always outnumber the female population (due to the nature of the majors offered), the young women will always receive a great deal of attention from the male students. The male student's behavior is human nature and not a variable we can control. What we can do; however, is meet with the female students at the beginning of the school year and share with them the stressors they may encounter, such as, attention from the males and give them ways to handle or cope with these stressors. We can prepare the young women for the type of environment they are entering; one they will also encounter when they enter the work place. In addition to the having these discussions involving coping the college could also include male students in discussions involving how to co-exist with the young women enrolled at the college. Having the male students involved in this learning process could be a positive experience for all. The college would be preparing the male students for ways to interact and work with the females while also giving them a chance to express any concerns they may have. The male students may be more responsive to creating an inclusive environment if they feel they were a part of the process from the beginning.

The Vice President is very supportive of adding additional majors which would attract young women and increasing the overall female population. This goal is a

major part of his Academic Plan for the college for the next few years. He is hoping to increase the number of young women on campus by 50%. This is an exciting goal but one which will take time. It will take several years of recruiting and retaining young women to achieve this goal. Additional housing and activities for the young women are a part of this overall plan. Having more young women on campus will also help the students feel as if they have a larger support system. Spreading the word to younger young women about non-traditional majors has also begun to occur. This summer the college hosted several summer camps for girls ages 10-14 where they learned how to make jewelry boxes in the carpentry shop and repair a leaky faucet in the plumbing shop.

Overall, we determined that the best way for the college to assist the female students with these stressors is to offer workshops throughout the year to prepare them for what types of stressors to expect and how to cope with them. The changes and recommendations suggested are long-term solutions to these stressors. The college hopes to implement these changes within the next three years. In the short term, for the fall 2012 semester, we plan to offer guidance and advice to the students so that their experience at TSCT will be a positive and successful one.

### *Results of Recommendations*

Since the focus groups occurred last spring several of the recommendations by the female students have been put into action. For example, one recommendation was to add new majors which would appeal to females. The college has conducted several brainstorming sessions with faculty, staff and the community at large to generate ideas for new majors which would attract more females. The female students suggested

culinary arts and criminal justice as two majors to consider. These suggestions along with several others (such as veterinary technician, paralegal and business coupled with cosmetology) are being researched by college personnel.

Another suggestion which arose from the focus group session was the idea of creating a marketing piece targeted directly at prospective female students. I met with the Director of Marketing and the Women's Center Intern during the summer months regarding this idea. The Marketing Director was able to create a brochure highlighting current female students and the benefits of pursuing a technical career at Thaddeus Stevens College. This recruiting tool has been distributed throughout Pennsylvania to prospective female students, guidance counselors and instructors since August.

Based on feedback from the students, the Women's Center Intern was able to host a Meet and Greet Luncheon for the new and returning female students during Orientation Week in mid-August. This gave new students an opportunity to meet other females on campus and interact with returning students and female staff.

The remaining suggestions are being considered. I have met with the Director of Multicultural Affairs regarding establishing a Mentoring Program for the female students. He currently oversees the campus-wide mentoring program for at-risk students. He is supportive of creating and maintaining a Mentoring Program focusing on matching up a freshmen female student with a second year female student or a female staff member/instructor. For example, the freshmen Plumbing instructor is a female and she would be a good role model and mentor for an incoming freshmen student particularly one enrolled in a construction major.

I also plan to contact several military colleges to learn how they have incorporated sexism as a component of their orientation program with new students. The environment at this type of institution would be similar to the type of environment at TSCT.

On another note, the college has contacted the national branch of the Women in Trades and Technology Organization to arrange a one day training session for staff and instructors at the college. The college is hoping to increase the number of females on campus by 50% within the next few years. In order to achieve this goal, all members of the campus community need to be educated on how to help with recruiting females and retaining the students who enroll. This training session is scheduled to occur by the end of the year.

#### *Future research*

To expand the outcomes of this initial research, I could continue by going forward in one of several directions. The group of young women enrolled at Thaddeus Stevens College appears to be a strong group of women who have a specific goal in mind and who have persisted through stressors that could have had a negative impact on their enrollment. It would be interesting to speak more in depth with young women who have left the college; not only those who left while this study was occurring but those who have left during previous semesters. Determining what stressors they experience which led to their dismissal or withdrawal would be very useful information for the college to have. Mechanisms could be put into place so that students experiencing these stressors could be helped before reaching the point of dismissal or withdrawal.

It would also be useful for this researcher to continue interviewing the female students enrolled at the college on a yearly basis. It would be helpful to separate the female students by year; conduct focus group sessions with the freshmen students at one time and with the second year students at another time. The stressors experienced by these groups may vary. For instance, the first year students may note short term stressors as problematic where as the second year students may mention different stressors. They have most likely learned to cope with the short term stressors since they have matriculated through several semesters.

Coping is another area of interest with regards to this unique group of students. It would be worthwhile to determine the coping mechanisms utilized by the second year female students. Strategies that have been useful to this group can be shared with the incoming female students to help make their transition to the college experience more positive.

The male students enrolled at the college would be another group who could be studied. Many of the male students arrive at Stevens having been apprenticed since childhood in one of the various majors offered. They already have a level of ability, some hands-on experience (whether it be from working with a family member or attending a career and technology center) and preconceived notions about women working in these non-traditional fields. Some of the male students may feel that the female students are encroaching in their territory and do not belong in these type of careers. It would be interesting to gain a perspective from the male students as to how they perceive females in these various majors; if they are accepted and when this acceptance occurs during the semester.

It would also be interesting to interview the male instructors from the various majors in order to understand their attitudes and perceptions towards females in these majors. There may be some who do not view the inclusion of women as favorable in what have been male dominated careers for decades.

### *Conclusion*

The goal of this research was to determine if this unique group of female students enrolled in this male dominated college environment were experiencing stressors and what these stressors were. This research was successful in uncovering the stressors, determining their impact on academic performance and eliciting recommendations for future changes at the college. The information gathered from this study is already being considered and utilized by the college administration and personnel. From a researcher perspective, this study assisted the college with gathering useful data that can be utilized to create positive changes for this special group of female students. I plan to continue this worthwhile endeavor by conducting additional focus group sessions each spring with the female students enrolled at the college.

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## Appendix A: Questionnaire

### Questionnaire- Female students at TSCT

**Instructions:** Please complete the following questions. Should you have any questions, please feel free to ask before returning your questionnaire.

1. What is your age? \_\_\_\_\_
2. What is your ethnicity? (circle one)  
African American    Caucasian    Hispanic    Other (specify): \_\_\_\_\_
3. What is your hometown? \_\_\_\_\_
4. What is your current housing status? (circle one)  
Resident                      Commuter
5. What is your marital status?(circle one)    Married    Single    Engaged    Divorced
6. Are you currently working while attending school? (circle one)    Yes              No  
If yes, how many hours/week do you work? \_\_\_\_\_
7. Do you have children? (circle one)              Yes              No
8. What do you expect your grade point average will be for this semester? \_\_\_\_\_
9. Are there any extraordinary circumstances in your life that you would like to share?
10. How did you make the decision to attend TSCT?
11. What motivated you to enroll at TSCT?
12. Would you be interested in being interviewed should I have further questions once the data from the focus groups is analyzed?

## **Appendix B: Informed Consent Form for Focus Group Informed Consent Form for Social Science Research**

**Title of Project:** Sources of stress for female students in a two-year college environment: A case study

**Principal Investigator:** Erin K. Nelsen  
Thaddeus Stevens College of Technology  
750 East King Street  
Lancaster, PA 17602  
717-299-7772  
[nelsen@stevenscollege.edu](mailto:nelsen@stevenscollege.edu)

**Advisor:** Mary Jane Kuffner Hirt, Ph.D.  
Indiana University of Pennsylvania

**Purpose of this Study:** The purpose of this research is to understand your experiences as a female student at a two-year technical college.

**Procedures to be followed:** You will be asked to answer questions in a focus group format. About 6-8 students will join the focus group. The focus group discussion will be recorded and transcribed. All names and identifying information will be removed from the transcripts.

**Discomforts and Risks:** There are no risks in participating in this research beyond those experienced in everyday life. Some of the questions may be viewed as personal in nature and may cause discomfort. In case of any issues or concerns, please contact Counseling Services at 717-391-7236.

**Benefits:** The benefits to you include an opportunity to share your experiences as a female student enrolled at a two-year technical college adding to the existing body of knowledge on this topic. This study will provide Thaddeus Stevens College of Technology with valuable insight into any challenges you may be facing and assist the college in determining what services may be needed to aid in the retention of students like your selves.

**Duration:** The focus group will last approximately 60 minutes.

**Statement of Confidentiality:** Your participation in this research is confidential. The data will be stored and secured at the home of the principal investigator in a locked file. In the event of a publication resulting from this research, no personal identifying information will be shared. If you choose to participate, all information will be held in strict confidence and will have no bearing on your academic standing or the services

you receive from Thaddeus Stevens College. If you speak about the focus group outside of the group, it is expected that you will not tell others what individual participants said. Your response will be considered only in combination with those from other participants.

**Right to Ask Questions:** Please contact Erin K. Nelsen at 717-299-7772 with questions, complaints or concerns about this research. You can also call this number if you feel this study has harmed you.

**Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at anytime. You do not have to answer questions you do not want to answer. Refusal to take part in or withdrawing from this study will involve no penalty.

You must be 18 years of age or older to consent to take part in this research study. If you agree to take part in this research study and the information outlined above, please sign your name and indicate the date below.

You will be given a copy of this consent form for your records.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Person Obtaining Consent

\_\_\_\_\_  
Date

## Appendix C: Letter of consent from Thaddeus Stevens College

Office for Academic Affairs



THADDEUS STEVENS  
COLLEGE OF TECHNOLOGY  
FOUNDED 1905

February 10, 2011

Erin K. Nelsen  
Director of Enrollment Services  
Thaddeus Stevens College of Technology  
750 East King Street  
Lancaster, PA 17602

Dear Erin:

I am very pleased to grant permission for you to conduct your doctoral dissertation study at Thaddeus Stevens College of Technology. Please obtain releases from the participants if you intend to use their personal information in the study.

Best wishes,

*William R. Thompson*

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