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**Perceived Stress in the Field of Athletic Training**

**A Graduate Project**

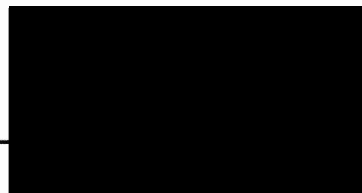
**In Partial Fulfillment of the Requirements for a Masters of  
Science Degree in Sports and Athletics Administration**

**Lynn University**

**Graduate School**

**By: Gregory R. Burnett ATC/L**

**August 5, 2002**



**Approved by**

**Dr. Richard A. Young**

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## **Abstract**

The purpose of this study was to determine the significance of the relationships between the three personal/situational variables and perceived stress, from R.E. Smith's model, and how it related to the field of athletic training (Hendrix, et al., 140).

The hypothesis for this study stated that perceived stress levels were more significantly related to hardiness and social support levels than to relevant work-related issue levels (i.e. athletic training issues) as they relate to the field of athletic training. Conversely, athletic training issues play a less significant role in perceived stress levels.

Results from the study indicated that a fairly strong relationship existed between perceived stress and social support and between perceived stress and hardiness. A somewhat less significant relationship was also found to exist between perceived stress and athletic training issues. Therefore, based on the research, the first half of the hypothesis stating that perceived stress levels were more significantly related to hardiness and social support levels than to athletic training issue levels was supported. Secondly, the last half of the hypothesis stating that athletic training issues play a less significant role as related to perceived stress levels was also supported.

## **Chapter I**

### **Introduction**

For physicians and police officers, stress and burnout are topics that sound all too familiar. Similarly, this is the case for other service-oriented professions, including social workers and attorneys. While an abundance of research has addressed these topics, a shortage has been discovered as related to sport. To date, much of the already limited amount of literature relating stress and burnout to sport pertains to coaches and sport officials. Only recently have researchers begun to address this topic as it relates to the field of athletic training (Hendrix, et al., 139).

A model proposed by Smith (Hendrix, et al., 140), pertaining to stress and burnout, provided the theoretical framework for this study. This paper was directed toward the stress associated with being in the athletic training profession, while the scope was limited to the examination of the relationship between perceived stress and the three personal/situational variables, as they related to athletic training. The test group of this study was certified athletic trainers who worked at Division II universities.

The hypothesis for this study stated that perceived stress levels were more significantly related to hardiness and social support levels than to relevant work-related issue levels (i.e. athletic training issues) as they relate to the field of athletic training. Conversely, athletic training issues play a less significant role in perceived stress levels.

## **Chapter II**

### **Review of Literature**

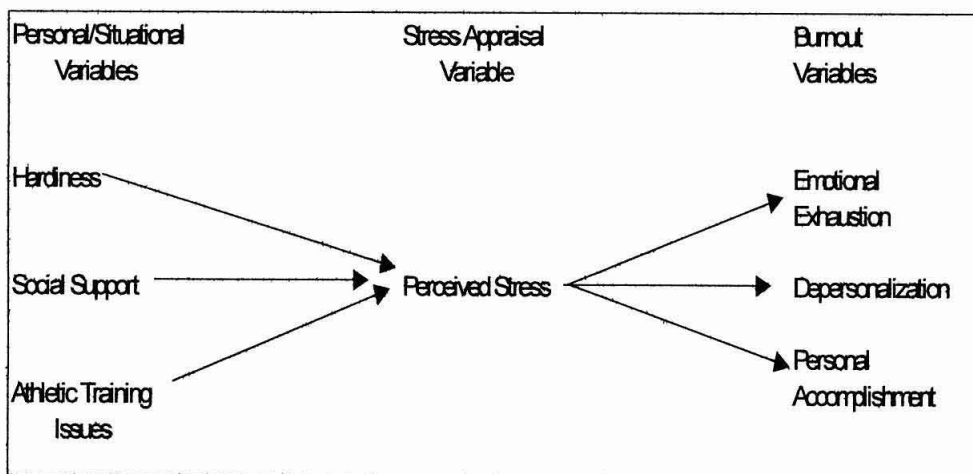
In today's fast paced society, increased levels of perceived stress and burnout have been reported in a wide variety of service-oriented professions, including police officers, nurses, physicians, social workers, and attorneys (Hendrix, et al., 139). In June of 1990, athletic training gained acceptance into this rapidly expanding world of service-oriented professions when the field was recognized by the American Medical Association as an allied health profession (Behnke and Delforge 59). Be that as it may, many certified athletic trainers, as medical professionals, continue to live with the old attitudes and beliefs of having to work long hard hours (often more than sixty hours) a week (Houglum, 13). A study of the sports medicine literature reveals that much of the focus is directed toward the preparation of athletic trainers rather than the circumstances that encompass the work lives of athletic trainers (Staurowsky and Scriber, 245).

According to Maslach (1978), burnout can be viewed as a stress related illness relating to the repeated emotional pressure of working with people and characterized by depersonalization, emotional exhaustion, and decreased personal accomplishment (Rowe, 16).

More recently, Smith took Maslach's burnout theory a bit further by adding two extra components. The first component, borrowed from Maslach, was characterized by depersonalization, emotional exhaustion, and personal accomplishment, which Smith referred to as the burnout variables. The second

component of Smith's model was the stress appraisal variable. This was the perceived stress. Perceived stress can be defined as the measurement of thoughts and feelings about stressful events, control, overload, coping, and experienced stress (Hendrix, et al., 141). The third and final component of Smith's model is what he termed the personal/situational variables which included hardiness, social support, and work-related issues (Hendrix, et al., 140). Hardiness is a personality construct that relates one's abilities to commitment, purpose, and challenge. For the purpose of this study, social support was thought of as the degree of satisfaction one receives from the support rendered by family and friends. The work related issues pertaining to this study revolved around the field of athletic training and for the remainder of this paper be referred to as the "athletic training issues" (Hendrix et al., 140). Smith's model related to the field of athletic training is represented in Figure 1 (Smith 36 and Hendrix, et al., 140).

**Figure 1: Smith's Model Related to Athletic Training**



In April of 2000, Amy Hendrix conducted a study based on the heavily supported theoretical framework established from Smith's model, which examined stress and burnout in certified athletic trainers at Division I-A universities (Hendrix et al., 139-144). In her conclusion, Hendrix stated that her research supported Smith's theoretical model of stress and burnout. According to Hendrix, "Athletic Trainers who scored lower on hardiness and social support and higher on athletic training issues tended to have higher levels of perceived stress" (Hendrix, et al., 139). The April 2000 Hendrix study also found that "higher perceived stress scores were related to higher emotional exhaustion and depersonalization and lower levels of personal accomplishment" (Hendrix, et al., 139). It should be noted that no theoretical shortcomings or biases were found in the Hendrix study.

As stated above, the April 2000 Hendrix study focused on certified athletic trainers from Division I-A universities. This study, while based on Smith's model, evolved from Hendrix's study in that it focused on certified athletic trainers from Division II universities. However, unlike the Hendrix study, this study was limited in scope to the examination of the relationships between the three personal/situational variables and perceived stress.

Although beyond the scope of this study, further examination of the data from this and future research may some day shed light as to how similar or dissimilar athletic trainers from different divisions react to a specified circumstance.



## **Chapter III**

### **Methodology**

Institutions were randomly selected for this study based on the October 7, 2001 NCAA Women's Division II Ratings for Women's Soccer. Every third institution, out of the 182 institutions rated, was selected until a random pool of 50 colleges/universities was generated. Since the author of this study is enrolled with an institution belonging to the Sunshine State Conference, institutions belonging to the Sunshine State Conference were also included in this study. This brought the total pool to 56.

A total of 56 survey packets were mailed via U.S. mail on November 1, 2001. Each packet was addressed to the Head Athletic Trainer and contained one cover letter and four surveys, each with instructions and a postage paid return envelope. The survey was designed and written by the author of this study. The deadline for return was December 28, 2001. Surveys indicating that the participant had less than one year of experience as a certified athletic trainer were excluded from the study. The receipt of a completed survey was deemed as permission to be included in the study.

Scoring of the completed surveys commenced by breaking the survey down into four categories: hardiness, perceived stress, social support, and athletic training issues. The hardiness component encompassed survey questions 1,4,5,13,20,21,22,28, and 29. The perceived stress component encompassed

survey questions 9,10,12,15,16,17, and 18. The social support component encompassed survey questions 6,7,8,11,19,23,26,31, and 32. The forth and final component, athletic training issues, encompassed survey questions 2,3,14,24,25,27, and 30. After sorting the individual components, the surveys were categorized into four predetermined categories. The categories were: Head Athletic Trainers' With Football Programs, Assistant Athletic Trainers' With Football Programs, Head Athletic Trainers' Without Football Programs, and Assistant Athletic Trainers' Without Football Programs. Next, each survey was hand scored by assigning predetermined numeric values to the Likert Scale responses. Scoring a response to a positive statement on the survey was: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, and Strongly Disagree = 1. Scoring a response to a negative statement on the survey was: Strongly Agree = 1, Agree = 2, Neutral = 3, Disagree = 4, and Strongly Disagree = 5 (Johnson and Nelson, 396-7). Statements left unanswered or having more than one response were scored as a "neutral" response. To complete the scoring, the numeric values for each component were added together, allowing for a single score to be determined for each component for each survey.

A Pearson Product Moment was calculated to find a possible correlation between Perceived Stress and the other three components. Due to survey design and lack of psychometric testing, validity and reliability arguments could be brought forth challenging the results of this study. It should be noted that the model from which this study was based was widely supported by the scientific community, and was the basis for much of the research relating to stress and

burnout (Hendrix et. al., 139). Similarly, the scoring scale utilized in this study was based on the scoring scale utilized by many of today's standardized psychological testing tools (Hendrix et. al., 140-41).

## Chapter IV

### Results

A total of 72 completed surveys were received in response to the study. It was determined that 40 of the 56 institutions receiving a survey packet had at least one certified athletic trainer (ATC) who completed and returned a survey, yielding an institutional response rate of 71%. Because of some response discrepancies on the survey regarding ATC staff size, an individual return yield could not be determined. Appendix A represents a sample of the survey. A summary of the results is listed in Table 1 and Table 2 and in Graphs 1-4.

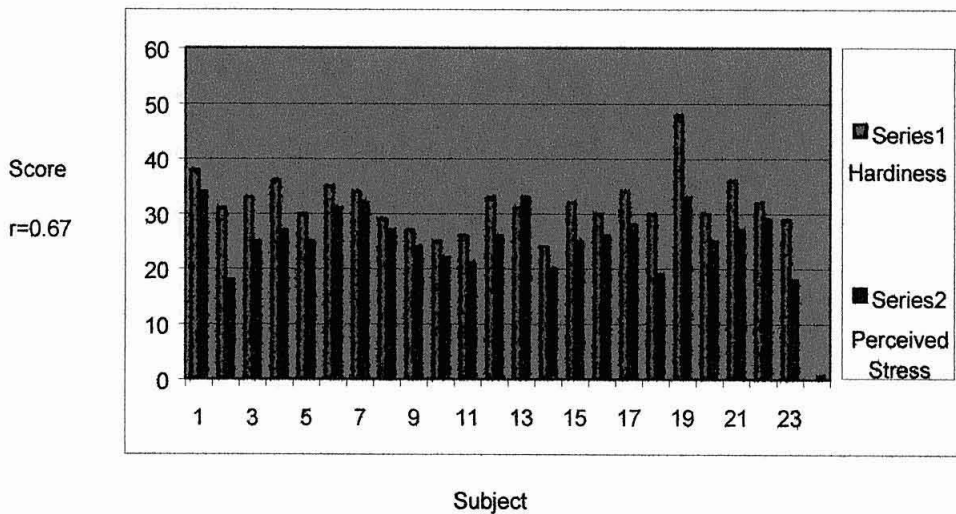
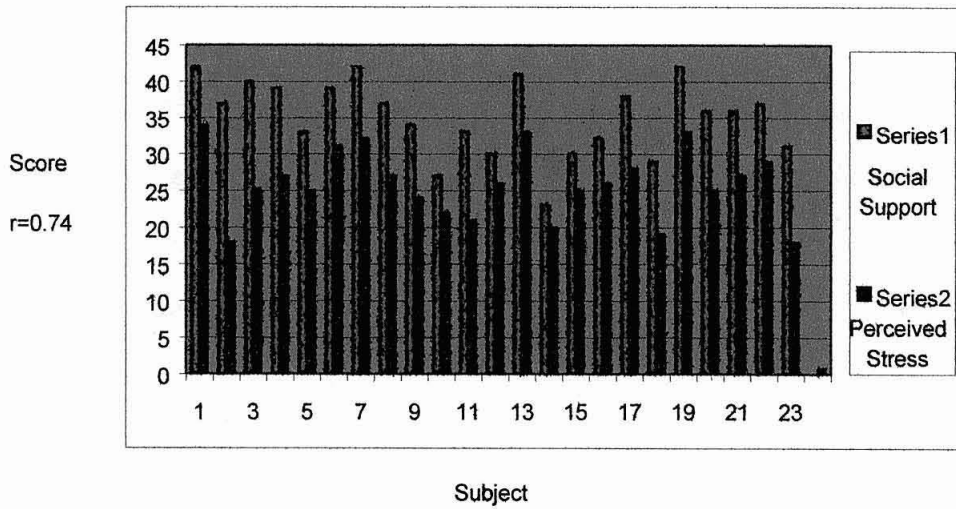
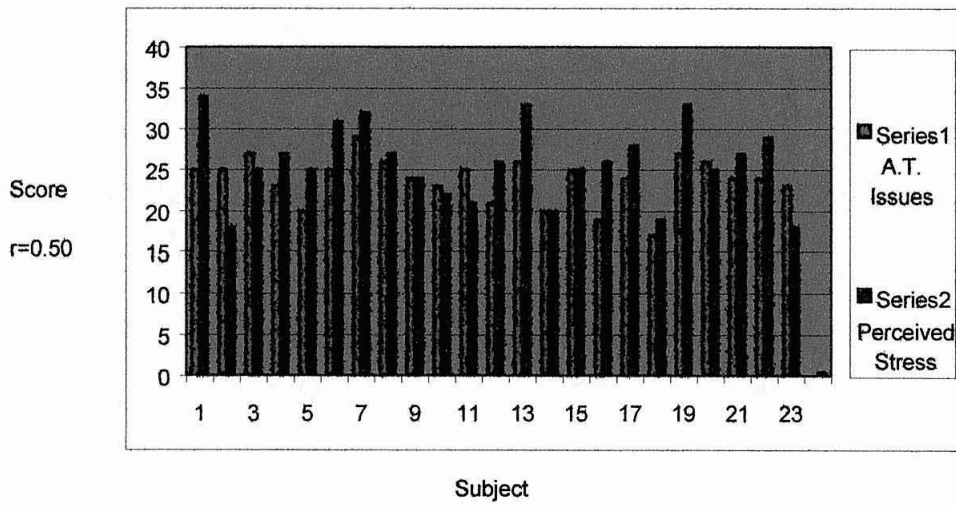
**Table 1: Personal/Situational Variables Versus Perceived Stress**

Title	Hardiness	Social Support	Athletic Training Issues
Head Athletic Trainers' Without Football	$r = 0.672$	$r = 0.741$	$r = 0.498$
Assistant Athletic Trainers' Without Football	$r = 0.786$	$r = 0.745$	$r = 0.228$
Head Athletic Trainers' With Football	$r = 0.750$	$r = 0.798$	$r = 0.617$
Assistant Athletic Trainers' With Football	$r = 0.586$	$r = 0.510$	$r = 0.496$

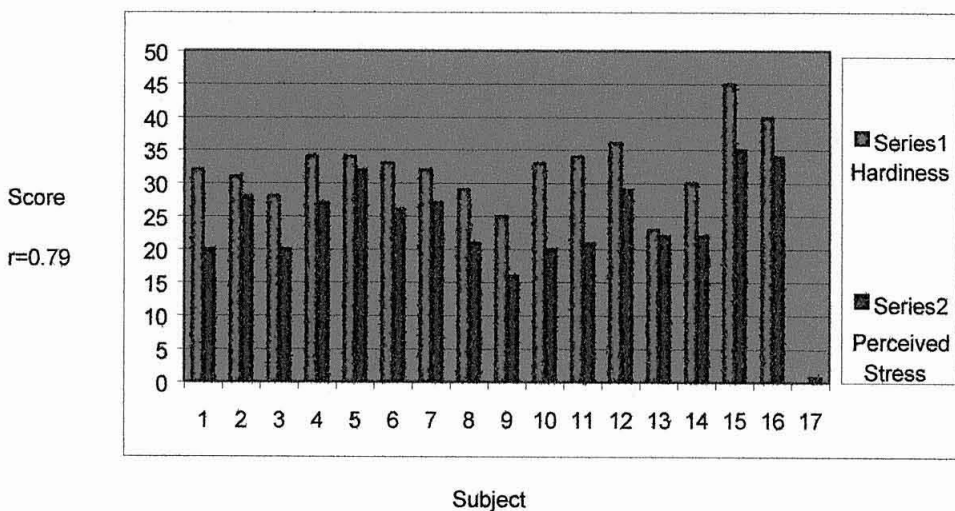
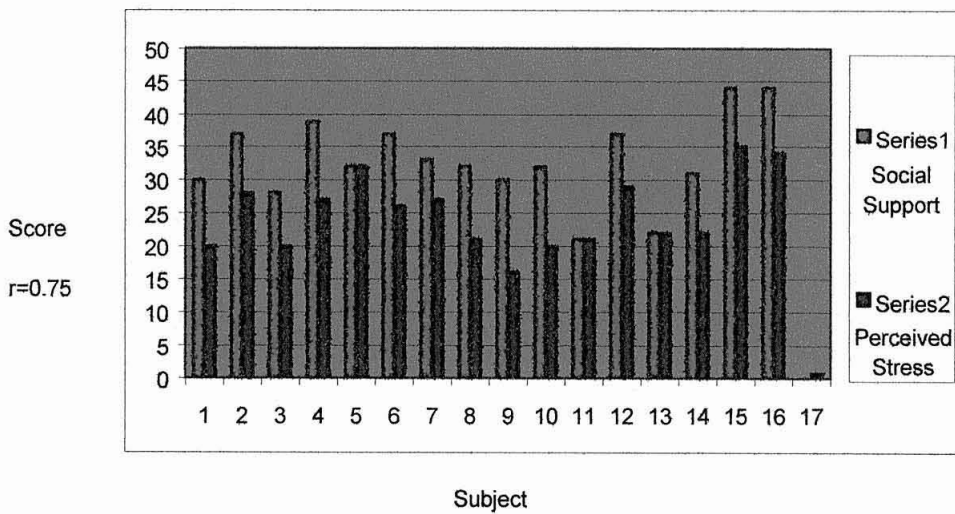
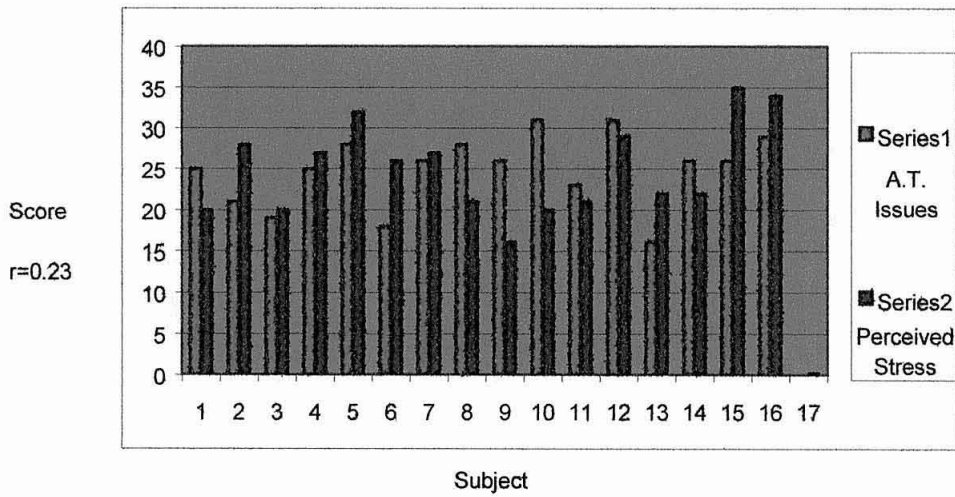
Table 2: Demographic Catagorization

	Head Athletic Trainer		Assistant Athletic Trainer	
	Football	w/o Football	Football	w/o Football
Number of Years as an ATC :				
1 to 5	14%	30%	65%	81%
6 to 10	29%	52%	10%	13%
11 to 15	7%	9%	15%	0%
16 to 20	29%	4%	5%	6%
over 20	21%	4%	5%	0%
Status of Employment:				
FT- 12 mo.	71%	50%	90%	24%
11 mo.	29%	5%	0%	0%
10 mo.	0%	36%	5%	59%
Other	7%	5%	0%	0%
PT	0%	5%	5%	18%
Marital Status:				
Married	43%	59%	30%	41%
Single	50%	36%	65%	59%
Divorced	7%	5%	5%	0%
Widowed	0%	0%	0%	0%
Highest Level of Education Completed:				
Bachelor's	7%	14%	20%	41%
Master's	86%	86%	75%	59%
Ph.D.	7%	0%	5%	0%
Avg. hrs./day worked:				
Under 6	0%	5%	5%	6%
6 to 8	0%	9%	10%	6%
8 to 10	50%	55%	45%	41%
10 to 12	36%	27%	40%	47%
12 to 14	14%	5	0%	0%
Over 14	0%	0	0%	0%
Avg. hrs./week worked:				
Under 40	0%	5%	5%	6%
40 to 45	7%	18%	10%	12%
45 to 50	0%	9%	20%	12%
50 to 55	21%	27%	10%	18%
55 to 60	21%	32%	20%	47%
Over 60	36%	9%	35%	6%
Avg. number of days worked consecutively				
Under 5	0%	0%	0%	0%
5 to 7	36%	36%	20%	35%
7 to 10	7%	18%	25%	29%
10 to 12	7%	9%	0%	12%
12 to 14	7%	23%	5%	18%
Over 14	43%	14%	50%	6%
Remain working in an ATC capacity in ten years?				
Yes	57%	45%	55%	65%
No	43%	55%	45%	35%

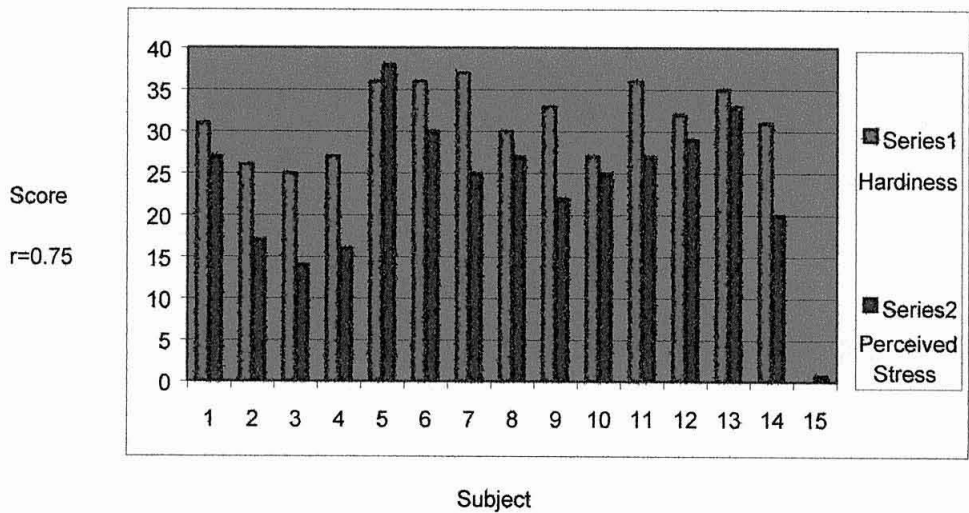
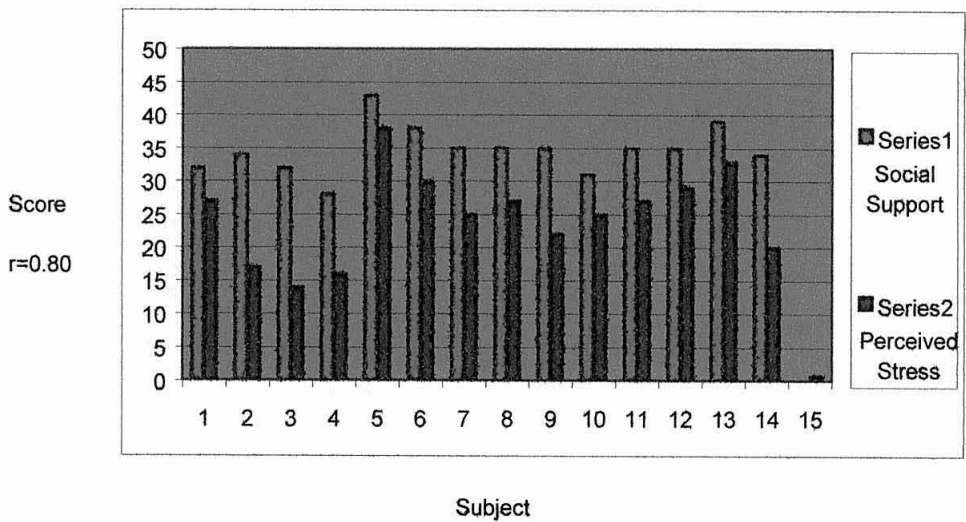
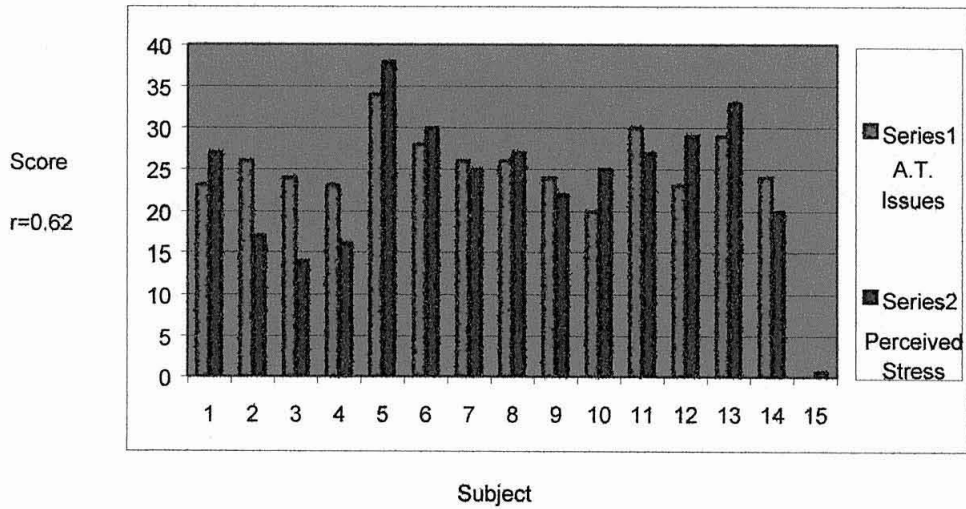
**Graph 1: Head Athletic Trainers' Without Football**



**Graph 2: Assistant Athletic Trainers' Without Football**

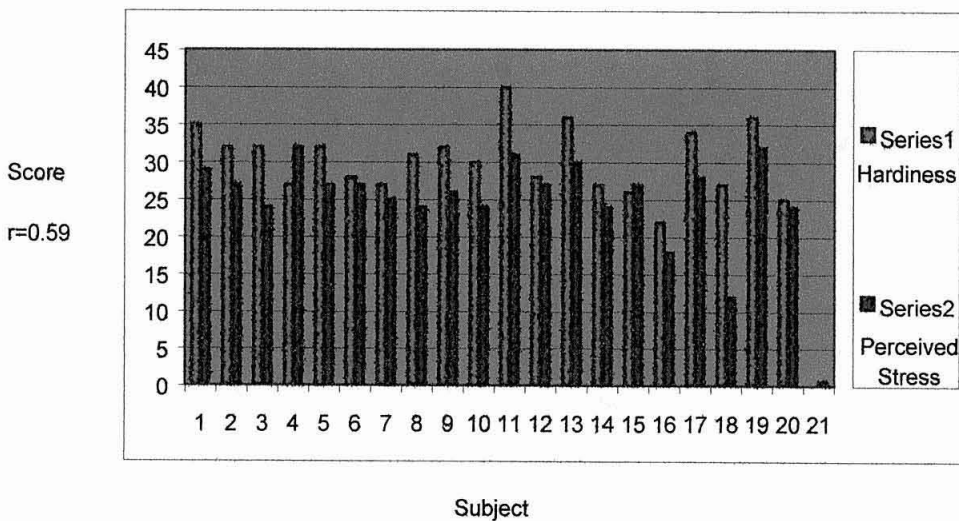
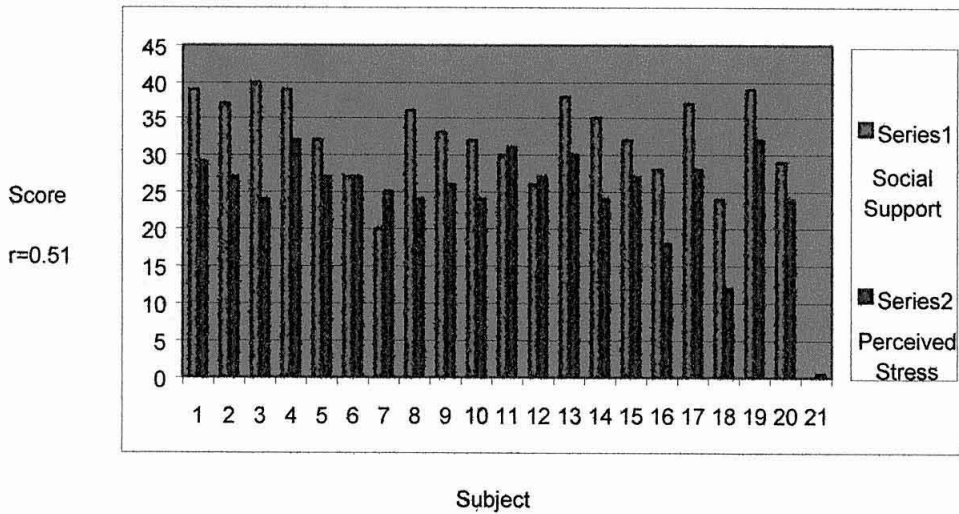
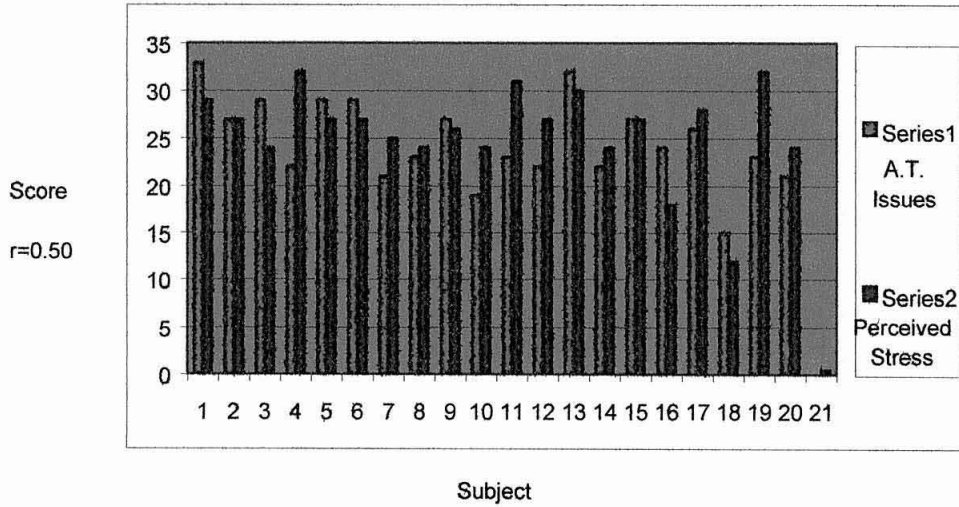


**Graph 3: Head Athletic Trainers' With Football**





**Graph 4: Assistant Athletic Trainers' With Football**



The Head Athletic Trainers' Without Football category (Graph 1) yielded a total of 23 participants. When relating to Smith's model, it was determined that there was a high correlation ( $r = 0.74$ ) between perceived stress and social support. Similarly, a substantial relationship ( $r = 0.67$ ) was found between perceived stress and hardiness. Only a slight to fair relationship ( $r = 0.50$ ) was found to exist between perceived stress and athletic training issues.

The Assistant Athletic Trainers' Without Football category (Graph 2) yielded a total of 16 participants. When relating to Smith's model, it was determined that a high correlation existed between perceived stress and social support ( $r = 0.75$ ) and between perceived stress and hardiness ( $r = 0.79$ ). Again, no significant relationship was found to exist between perceived stress and athletic training issues ( $r = 0.23$ ).

The Head Athletic Trainers' With Football category (Graph 3) yielded a total of 14 participants. In relating to Smith's model, it was determined that a high correlation existed between perceived stress and social support ( $r = 0.80$ ) and between perceived stress and hardiness ( $r = 0.75$ ). Similarly, a substantial relationship was found to exist between perceived stress and athletic training issues ( $r = 0.62$ ).

The Assistant Athletic Trainers' With Football category (Graph 4) yielded a total of 20 participants. In relating to Smith's model, it was determined that a substantial correlation existed between perceived stress and hardiness ( $r = 0.59$ ). Meanwhile, only a fair relationship could be shown to exist between perceived

stress and social support ( $r = 0.51$ ) and between perceived stress and athletic training issues ( $r = 0.50$ ).

## **Conclusion**

In conclusion, it was determined that a fairly strong relationship existed between perceived stress and social support and between perceived stress and hardiness. A somewhat less significant relationship was found to exist between perceived stress and athletic training issues. Therefore, based on the above research relating to Smith's model, the first half of the hypothesis stating that perceived stress levels were more significantly related to hardiness and social support levels than to athletic training issue levels was supported. Secondly, the last half of the hypothesis stating that athletic training issues play a less significant role as related to perceived stress levels was also supported.

This study had a stronger relevance to the author than what was initially contemplated. Based on the aforementioned research and upon the reflection of the past six years of first hand experiences as an athletic trainer, the researcher has gained from this study an enhanced perspective with regards to the social intricacies of a certified athletic trainer.

The research indicated that there was a higher correlation to perceived stress as related to hardiness and social support than to athletic training issues. Contrary to the findings; however, the researcher believed there would be a somewhat stronger correlation to perceived stress as related to athletic training issues than what was identified by the study.

While the scope of this study was limited so as to not indicate actual stress levels; tabulations, while not conclusive, tended to suggest the notion that athletic

training personnel without football programs endured stress levels that are equal to or exceed stress levels endured by their counterparts whom manage football programs. Further research on perceived stress levels is recommended before such claims can be substantiated.

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**APPENDIX A**

Questionnaire

University/ College: \_\_\_\_\_

Title/ Position: \_\_\_\_\_

Number of year as an A.T.,C.: \_\_\_\_\_ Number of years at present location: \_\_\_\_\_

Sports currently offered at institution: (check all that apply).

Football \_\_\_\_\_ Men's Soccer \_\_\_\_\_ Women's Soccer \_\_\_\_\_

Volleyball \_\_\_\_\_ Cross Country \_\_\_\_\_ Men's Tennis \_\_\_\_\_

Women's Tennis \_\_\_\_\_ Men's Basketball \_\_\_\_\_ Women's Basketball \_\_\_\_\_

Men's Golf \_\_\_\_\_ Women's Golf \_\_\_\_\_ Men's Track & Field \_\_\_\_\_

Women's Track & Field \_\_\_\_\_ Men's Swimming/ Diving \_\_\_\_\_ Baseball \_\_\_\_\_

Women's Swimming/ Diving \_\_\_\_\_ Softball \_\_\_\_\_ Crew \_\_\_\_\_

Other (specify): \_\_\_\_\_

Status of employment: (check all that apply).

Fulltime \_\_\_\_\_ 12 month contract \_\_\_\_\_ Other (specify) \_\_\_\_\_

Part-time \_\_\_\_\_ 10 month contract \_\_\_\_\_

Number of ATCs on staff: \_\_\_\_\_ Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Marital Status: Single \_\_\_\_\_ Married \_\_\_\_\_ Divorced \_\_\_\_\_ Widowed \_\_\_\_\_

Highest level of education completed: Bachelor's \_\_\_\_\_ Master's \_\_\_\_\_ Ph.D. \_\_\_\_\_

Primary sport coverage assignments/responsibilities:

\_\_\_\_\_



The following group of statements should be addressed using a five- point Likert scale. Answer with a **SA** for strongly agree, an **A** for agree, a **N** for neutral, a **D** for disagree, or a **SD** for strongly disagree. Write the appropriate letter(s) that correspond to your answer in the blank preceding each statement.

- \_\_\_\_\_ 1) I feel a sense of worth while performing my job.
- \_\_\_\_\_ 2) The facilities I work in are adequate in that I am able to perform my job to its highest potential.
- \_\_\_\_\_ 3) Staffing is adequate so as to meet the needs of each individual team.
- \_\_\_\_\_ 4) I have a strong sense of accomplishment when I leave work for the day.
- \_\_\_\_\_ 5) I consider myself somewhat of a cynic.
- \_\_\_\_\_ 6) I am able to attend most family/ friend outings.
- \_\_\_\_\_ 7) I believe the Athletic department, as a whole, respects what I contribute to the program.
- \_\_\_\_\_ 8) I have a good working relationship with the coaches, physicians, school administrators, and fellow athletic training staff members.
- \_\_\_\_\_ 9) I feel emotionally drained at the end of a work day.
- \_\_\_\_\_ 10) I feel immense pressure and anxiety throughout the course of an average work day.
- \_\_\_\_\_ 11) I have a good network of support from family and friends.
- \_\_\_\_\_ 12) I tend to be optimistic and easy going about most things outside of work.

- \_\_\_\_\_ 13) I feel I have enough time to myself.
- \_\_\_\_\_ 14) I am satisfied with choosing athletic training as a career path.
- \_\_\_\_\_ 15) In general, I am optimistic about my work and life.
- \_\_\_\_\_ 16) I dread going to work each day.
- \_\_\_\_\_ 17) My current job duties are causing me to feel very frustrated.
- \_\_\_\_\_ 18) I am not able to leave work at work.
- \_\_\_\_\_ 19) I am committed to spending time with my family and friends.
- \_\_\_\_\_ 20) I would describe myself as an introvert.
- \_\_\_\_\_ 21) I am committed to my work.
- \_\_\_\_\_ 22) I tend to be critical and pessimistic about most things at work.
- \_\_\_\_\_ 23) Interpersonal relationships outside of my work are difficult to maintain.
- \_\_\_\_\_ 24) Coaches are comfortable contacting me to discuss injury- related matters concerning their athletes.
- \_\_\_\_\_ 25) Our athletic training budget is adequate to meet the needs of our program.
- \_\_\_\_\_ 26) My chosen career path has come at the expense of my personal relationships outside of work.
- \_\_\_\_\_ 27) I enjoy the travel requirements that my employment entails.
- \_\_\_\_\_ 28) I would describe myself as an extrovert.
- \_\_\_\_\_ 29) My career has had known ill effect on my health.
- \_\_\_\_\_ 30) Performing my job provides me with a sense of accomplishment.

- \_\_\_\_\_ 31) I sense a feeling of respect among my peers, student- athletes,  
coaches, and administrators.
- \_\_\_\_\_ 32) I feel that the student-athletes are appreciative of the treatments they  
receive.

Multiple Choice: Place a check mark next to your response.

- 1) The approximate number of hours worked per day (excluding travel time):

_____ under 6	_____ 10-12
_____ 6-8	_____ 12-14
_____ 8-10	_____ over 14

- 2) The approximate number of hours worked per week (excluding travel time):

_____ under 40	_____ 50-55
_____ 40-45	_____ 55-60
_____ 45-50	_____ over 60

- 3) The approximate number of days worked consecutively before receiving an  
entire day off:

_____ under 5	_____ 10-12	_____ 5-7
_____ 7-10	_____ 12-14	_____ over 14

- 4) Do you see yourself working as an athletic trainer in ten years (yes or no):

_____ yes	_____ no
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