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Presence of Burnout in Undergraduate Athletic Training Students

Tamra Sparks Riter

Brigham Young University - Provo

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PRESENCE OF BURNOUT IN UNDERGRADUATE
ATHLETIC TRAINING STUDENTS

by

Tamra Sparks Riter

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Exercise Sciences
Brigham Young University
August 2006
BRIGHAM YOUNG UNIVERSITY

GRADUATE COMMITTEE APPROVAL

of a thesis submitted by

Tamra Sparks Riter

This thesis has been read by each member of the following graduate committee and by majority vote has been found to be satisfactory.

Date ___________________________  David A. Kaiser, Chair

Date ___________________________  J. Ty Hopkins

Date ___________________________  Todd R. Pennington
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Accepted for the College

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ABSTRACT

PRESENCE OF BURNOUT IN UNDERGRADUATE ATHLETIC TRAINING STUDENTS

Tamra Sparks Riter
Department of Exercise Sciences
Master of Science

Objective: To determine if undergraduate athletic training students enrolled in an athletic training education program (ATEP) and participating in a clinical assignment have burnout and if so, the possible causes.

Design and Setting: All undergraduate athletic training students enrolled in a clinical education course were surveyed twice in an eight week period. The surveys were given during the fourth week and the twelfth week of the winter 2006 semester. As part of the survey, each participant also answered eight demographic/status questions for correlation purposes.

Subjects: Fifty-one undergraduate athletic training students in a western United States university’s accredited ATEP served as subjects for this study.
**Measurements:** Data was analyzed using analysis of covariance with categorical independent variables and continuous covariants. Emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) were scored in accordance with the MBI-HSS. Post hoc testing was done when interactions/effects were significant at the $p = .05$ level. Dependent variables consisted of the three subsets of burnout (EE, DP, and PA).

**Results:** Overall mean scores demonstrated a moderate level (17.0) of EE, low levels (5.7) of DP, and moderate level (38.0) of PA. Fourth (+) semester students reported high DP levels (13.3) and high levels of EE (30.9). Semester effect ($p = \text{pre-} 0.0001; \text{post-} 0.007$), marital/serious relationship status by gender interaction ($p = \text{pre-} 0.008; \text{post-} 0.02$) and semester by gender interaction ($p = \text{pre-} 0.0017; \text{post-} 0.005$) all had an effect on EE for both testing times. For DP, marital/serious relationship status by semester interaction ($p = \text{pre-} 0.0121; \text{post-} 0.003$), semester ($p = \text{pre-} 0.0001; \text{post-} 0.0003$), and semester by gender interaction ($p = \text{pre-} 0.0001; \text{post-} 0.0001$) were significant interactions/effects for both pre and post-tests.

**Conclusions:** This study showed that with moderate PA, low DP, and moderate EE undergraduate athletic training students, demonstrated a moderate degree of burnout from their clinical assignments. The expectations of the ATEP appear to have a cumulative effect which is evidenced in the fourth (+) semester showing a high/average degree of burnout.

**Keywords:** Maslach Burnout Inventory, ATEP, clinical assignment.
ACKNOWLEDGMENTS

I would like to thank Dr. David Kaiser for his enthusiasm, patience, and dedication that made this project possible and successful. I would like to thank Dr. Ty Hopkins and Dr. Todd Pennington for their input and support. I would like to thank Dr. Ron Chamberlain for sharing his expertise in psychology and Dr. Dennis Eggett for helping me with my statistical analyses. I would like to express gratitude to the athletic training students at Brigham Young University who willingly participated in this project and ultimately made this achievable. I would like to thank the present and former Athletic Training staff at Brigham Young University, especially George and Gaye, for believing in me. An expression of thanks goes to my family for their encouragement which kept me going. I would like to send a special thanks to my parents Jack and Luann Sparks for teaching me to believe in myself and for telling me so many times to “study, study, study!” Lastly, I would like to thank my husband Ian, for being my pillar to lean on and my inspiration.
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PRESENCE OF BURNOUT IN UNDERGRADUATE ATHLETIC TRAINING STUDENTS

by

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Abstract

**Objective:** To determine if undergraduate athletic training students enrolled in an athletic training education program (ATEP) and participating in a clinical assignment have burnout and if so, the possible causes.

**Design and Setting:** All undergraduate athletic training students enrolled in a clinical education course were surveyed twice in an eight week period. The surveys were given during the fourth week and the twelfth week of the winter 2006 semester. As part of the survey, each participant also answered eight demographic/status questions for correlation purposes.

**Subjects:** Fifty-one undergraduate athletic training students in a western United States university’s accredited ATEP served as subjects for this study.

**Measurements:** Data was analyzed using analysis of covariance with categorical independent variables and continuous covariants. Emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA) were scored in accordance with the MBI-HSS. Post hoc testing was done when interactions/effects were significant at the \( p = .05 \) level. Dependent variables consisted of the three subsets of burnout (EE, DP, and PA).

**Results:** Overall mean scores demonstrated a moderate level (17.0) of EE, low levels (5.7) of DP, and moderate level (38.0) of PA. Fourth (+) semester students reported high DP levels (13.3) and high levels of EE (30.9). Semester effect \((p = \text{pre-} 0.001; \text{post-}\)
0.007), marital/serious relationship status by gender interaction \( (p = \text{pre-} 0.008; \text{post-} 0.02) \) and semester by gender interaction \( (p = \text{pre-} 0.0017; \text{post-} 0.005) \) all had an effect on EE for both testing times. For DP, marital/serious relationship status by semester interaction \( (p = \text{pre-} 0.0121; \text{post-} 0.003) \), semester \( (p = \text{pre-} 0.0001; \text{post-} 0.0003) \), and semester by gender interaction \( (p = \text{pre-} 0.0001; \text{post-} 0.0001) \) were significant interactions/effects for both pre and post-tests.

**Conclusions:** This study showed that with moderate PA, low DP, and moderate EE undergraduate athletic training students, demonstrated a moderate degree of burnout from their clinical assignments. The expectations of the ATEP appear to have a cumulative effect which is evidenced in the fourth (+) semester showing a high/average degree of burnout.

**Keywords:** Maslach Burnout Inventory, ATEP, clinical assignment.
Introduction

Emotional exhaustion, (feelings of being emotionally overextended and exhausted by one’s work), combined with depersonalization, (an unfeeling and impersonal response toward recipients of one’s service, care, treatment, or instruction) and personal accomplishment (feelings of competence and successful achievement in one’s work with people) are three subsets of a psychological syndrome that can occur among individuals who work with other people in some capacity.1-4 This syndrome, referred to as burnout, is very real in professionals, particularly those who are in the health care fields.5-17 The term health care professional is often synonymous with the words “hard work” and “long hours.” Athletic training is an AMA–recognized allied health profession. With long hours, limited time off, and a variety of people to deal with, this particular profession is one that regularly experiences high stress loads and burnout.5, 7, 8, 18, 19

Prior to becoming a certified athletic trainer (ATC) an individual must first complete an entry-level athletic training education program (ATEP). Included in the program are the general education courses required by the university, plus foundational courses, professional courses, and a required two years of clinical experience.20 Research has shown that graduate students, such as nursing, medical, and physical therapy students, who complete clinical hours, often experience burnout.11, 21-25

The general undergraduate student population has been shown to have high stress levels which may cause the students to experience burnout.9 Unlike most undergraduates, athletic training students are required to participate in a clinical
education experience and work long hours with many types of people, just as graduate students and professionals in health care fields. Yet, the only research done on athletic training students has focused on the assessment of clinical experience hours such as clinical behavior, engagement time, and active learning time. The purpose of this study was to determine whether burnout exists among undergraduate athletic training students and if so, to what extent (high, average, or low burnout according to EE, DP, and PA scores), and what are possible causes. The possible causes looked at were course load, semester in the ATEP, average hours per week spent in the clinical assignment, whether the clinical assignment is in- or out-of-season, marital/serious relationship status, gender, and the presence of a diagnosed mental disorder.

Methods

Participants

Fifty-two male and female college undergraduate athletic training students from a western US university, with an accredited ATEP, participated in this study. All students involved in this study held clinical education assignments. At the time of the study there were 57 students enrolled in the ATEP. Fifty-two students were enrolled in the clinical education courses during winter 2006 and served as the participants for this study. One participant returned an incomplete survey form and was excluded from the data analysis. The university’s Institutional Review Board for Human Participants approved this study prior to data collection. Each participant was informed of risks connected with participating in this study and provided informed consent preceding participation.
Research Design

All participants completed a modified Maslach Burnout Inventory Human Services Survey (MBI-HSS) twice in an eight-week period during the winter 2006 semester. The MBI-HSS is a validated and reliable instrument, and is one of the most commonly used measuring tools to determine professional burnout. All participants took the MBI-HSS during week four of the semester and again during week 12. Surveys were taken during the participants respective athletic training clinical education class (EXSC 394, 395, 494, or 495) according to their semester level in the program (1,2,3,4 (+)). Permission for administering the survey during these classes was obtained from each clinical education instructor with the understanding that no grade or incentive would be given. This was done to maximize the return rate of the survey instrument. Each class was read the instructions for the MBI-HSS and any questions regarding clarification of the instructions were answered. Careful attention was made to encourage honesty in answers and not direct answers in a biased manner. Participants were assigned a number which was placed on the top of their survey for identification and comparative analysis purposes.

Statistical Analysis

The dependent variables for this study consisted of the three subsets of burnout (depersonalization, personal accomplishment, and emotional exhaustion). Data were analyzed using analysis of covariance with categorical independent variables for survey questions with yes and no answers. Continuous covariants were used for all other
questions. Post hoc testing was done when interactions/effects were significant at the $p = .05$ level.

Results

Total participation was 51 subjects, with one exclusion due to an incomplete survey. The demographics of the participants are identified in Table 1.

**Overall Change from Pretest to Posttest**

Overall, emotional exhaustion (EE) only changed from pre to post by a mean of 2.75, with depersonalization (DP) changing only 1.75, and personal accomplishment (PA) only changing by 0.167. None of these changes were significant ($p$ of EE = 0.665; DP = 0.344; PA = 0.8503). Due to no statistically significant changes from pretest to posttest, the posttest results will be used for the purpose of discussion, with mention of pretest results.

**Emotional Exhaustion**

*Pretest.* Undergraduate athletic training students demonstrated a low emotional exhaustion (EE) mean score of 14.2. EE demonstrated a significant gender effect ($p = 0.0068$ (Figure 1)). Females showed moderate levels of EE (20.4) compared to low levels for males (13.2712).

*Posttest.* The post EE model was significant with a $p$ value of 0.0063. The mean of all participants showed a moderate level of EE (17.0). Marital/serious relationship status by gender interaction was significant for EE with a $p$ value of 0.02 (Figure 2). Semester in the program had a significant effect on EE ($p = 0.007$). Also significant was
marital/serious relationship status by semester interaction ($p = 0.037$ (Figure 3)) and semester by gender interaction $p = 0.005$ (Figure 4).

Marital/serious relationship status by gender interaction showed that males and females who were not married or in a serious relationship had moderate EE (23.9; 19.1). Females who were married or in a serious relationship demonstrated high EE (29.7) and males demonstrated moderate EE (17.4). Females who were married or in a serious relationship had significantly higher EE than males who were also married or in a serious relationship ($p = 0.0392$). First, second, and third semester athletic training students reported moderate levels of emotional exhaustion (17.9; 19; 22.2). Fourth (+) semester students reported high levels of emotional exhaustion (30.9 (Figure 5)) and were significantly higher than first and second semester students ($p = 0.0069; p = 0.014$).

Fourth (+) semester students who were not married or in a serious relationship showed high levels of EE (38) First and second semester students who were married or in a serious relationship demonstrated moderate EE (23.8; 20.1) as did third and four (+) semester students (26.3; 23.9). First, second, and fourth (+) semester females had moderate EE (17.4; 26.3; 22.7). Third semester females demonstrated high EE (31.1).

Depersonalization

**Pretest.** The mean depersonalization (DP) score for undergraduate athletic training students was at the low level (3.941). DP demonstrated a significant correlation with semester in the program ($p = <0.0001$), marital/serious relationship status by
semester interaction ($p = 0.0121$ (Figure 6)), and semester by gender interaction ($p = <0.0001$ (Figure 7)).

*Posttest.* The post DP model was significant for effects/interactions ($p = 0.0015$). The mean participant score showed low levels of DP (5.7). Marital/serious relationship status by gender interaction was significant ($p = 0.003$ (Figure 8)) along with semester effect for DP ($p = 0.0003$). Marital/serious relationship status by semester interaction was significant ($p = 0.003$ (Figure 6)) as was semester by gender interaction for DP ($p = 0.0001$ (Figure 7)).

Females who were not married or in a serious relationship had low DP (5.0) while males not married or in a serious relationship had moderate DP (11.5). Females in a serious relationship or married demonstrated moderate DP (9.4) and males in a similar situation had low DP (5.0). Males not married or in a serious relationship had significantly higher DP than females who were not married or in a serious relationship. First, second, and third semester students demonstrated low levels of DP (5.0; 6.2; 6.4). Fourth (+) semester students reported high DP levels (13.3 (Figure 5)) and were significantly higher than first ($p = 0.0003$), second ($p = 0.0018$), and third semester students ($p = 0.0266$).

With marital/serious relationship status by semester interaction, fourth (+) semester students not married or in a serious relationship reported high levels of DP (18.8). Fourth (+) semester students who did not have a significant other had a significantly higher DP than first, second, and third semesters who were also not married.
or in a serious relationship ($p = 0.0003; 0.0007; 0.0377$) and significantly higher than first, third, and fourth semesters who were married or in a serious relationship ($p = 0.0139; 0.0399; 0.0338$). First and fourth (+) semester females had low DP (5.4; 5.2). Second and third semester females had moderate DP (9.2; 8.9). Fourth (+) semester males reported high DP (21.3) and were significantly higher than first semester males and females ($p = 0.0002; 0.0002$), second semester males and females ($p = 0.0001; 0.0097$), third semester males and females ($p = 0.0029; 0.0179$) and fourth semester females ($p = 0.0004$).

**Personal Accomplishment**

Personal accomplishment is scored in the opposite direction of depersonalization and emotional exhaustion. Thus, a lower score demonstrates a higher degree of personal accomplishment and a higher score demonstrates a lower degree of personal accomplishment.$^4$

**Pretest.** PA scores showed a significant correlation with marital/serious relationship status by semester interaction ($p = 0.0484$ (Figure 9)) and semester by gender interaction ($p = 0.0148$ (Figure 10)).

**Posttest.** Participants reported moderate personal accomplishment with the posttest (38.0). The PA model demonstrated no significant interactions/effects ($p = 0.8503$).
Discussion

Fourth (+) semester students reported high DP levels (13.3) and were significantly higher than first ($p = 0.0003$), second ($p = 0.0018$), and third semester students ($p = 0.0266$). Also, fourth (+) semesters students reported high levels of emotional exhaustion (30.9) and were significantly higher than first and second semester students ($p = 0.0069; p = 0.014$). Although fourth (+) semester students only reported a moderate level of personal accomplishment (35.2), the EE and DP of these students is alarming. A high degree of burnout is classified as high EE and DP and low PA. Fourth (+) semester students have two-thirds of that equation and thus show a high/average burnout level. Also, this may be looked at as a high degree of burnout, but with some engagement with their clinical assignment. The last semester in an ATEP showed higher EE and DP than post-secondary educators (EE = 18.57; DP = 5.57), medical workers (EE = 22.19; DP = 7.12), mental health workers (EE = 16.89; DP = 5.72), and other professionals. This tells us that burnout in athletic training professionals could possibly have its beginnings in the burnout (EE, DP, and PA) experienced as an athletic training student.

The pretest for all three subsets demonstrated effects and/or interactions. This was as expected. In the posttest, only EE and DP had significant effects and/or interactions. PA did not have a significant effect or interaction ($p = 0.17$). For changes from pretest to posttest, not one of the three subsets demonstrated a significant change (EE- $p = 0.67$; DP- $p = 0.34$; PA- $p = 0.85$) from early in the semester (week 4) to near the end of the semester (week 12). EE only increased an average of 2.75 points. DP
increased by a mean of 1.75, while reduced PA increased by only 0.17. Although there was no statistically significant change, EE did increase from low to moderate while DP stayed at a low level but did increase, and PA stayed at a moderate level though PA was reduced.

Maslach and Jackson determined that burnout only has to be looked at once in order to decide whether there is burnout and how much there is in a profession. In accordance with the MBI-HSS, we may have been able to determine whether undergraduate athletic training students experienced burnout and to what extent in one testing session. However, two testing dates were chosen because the thought was that athletic training students would have an increase in burnout from the beginning of semester to the end of the semester. With the testing being done in the winter semester it is possible that the university’s short holiday break, when compared to a lengthier summer break, played a role in recovery from the fall semester. Thus athletic training students may not have been able to come into the winter semester fully refreshed, but rather were still burned out from the previous semester, especially in the case of females who may need more recovery time than males. This may have caused higher beginning scores and less of a difference between the beginning and end of the semester.

Females may be more emotional in their responses to stress, and may explain a higher emotional exhaustion level at the start of the semester, while it took males until the end of the semester to reach the level that the females were at in the beginning (Figure 9). As anticipated, both genders had the same level for DP and for PA. Burnout in
respect to EE and DP by semester in the ATEP followed a steady increase for both EE and DP from first semester to fourth (+) semester, both at the beginning of the semester and at the end of the semester (Figure 10). This progression was suspected prior to data collection due to the increased knowledge and responsibility that occurs with each semester.

It is important to realize that students in other ATEPs may not have as significant an influence played by marital/serious relationship status as students at this university. This institution does have a high percentage of married students (approximately 26% in Fall 2005). Unique to this university, men typically serve Church service missions for two years at the age of 19 and then come to school, or return to school if he has already started his education. This results in these men being older than most university males. Because of the age difference, and the unique culture of this specific university, a serious relationship usually means married or engaged.

Women who were married or in a serious relationship demonstrated higher EE and DP than men who were married or in a serious relationship. In many marriages, working women carry more of the workload at home in addition to their responsibilities in the work place. This may explain why the married women in this study experienced higher EE and DP than the married men. Furthermore, women derive much of their self-esteem from relationships and may be expending more emotionally than men when trying to be emotionally connected with athletes, coaches, and a significant other. This too may explain the higher EE and DP scores from this study. If men were not married or in
a serious relationship they had higher EE and DP than women. Men may feel less EE and DP with a significant other, because a significant other may be managing more family responsibilities. While single men may find it necessary to be expending energy on finding a significant other along with having to tend to all responsibilities such as schoolwork, cleaning, shopping, etc. Men who were married or in a serious relationship or were not married or in a serious relationship had a higher PA score, thus a lower amount of personal accomplishment than women. It may be that women are able to interact better with the athletes, or see the smaller accomplishments better than men. Also, those who were married or in a serious relationship, for either gender, had greater personal accomplishment than those who were not. Those who are in a serious relationship seem to feel that they accomplish more in their assignment and are probably more focused on the work needed and the details to be done rather than trying to find someone, which may be influencing what they perceive they have accomplished. Also, focus on searching for a significant other may be drawing attention away from the smaller accomplishments.

Fourth (+) semester athletic training students who were not married or in a serious relationship had the highest EE and DP of the semester level of the students tested. DP for students in their fourth (+) semester without a significant other reported significantly higher DP than all other semesters who were also without a significant other. Those who are not married or in a serious relationship may have had higher EE and DP because they are not sure if they will find someone to have a relationship with once they leave school.
In regard to semester and gender effect, males in their fourth (+) semester had high EE and DP. Women in their third semester had higher EE and DP than in their fourth semester. Men felt they personally accomplished more when in their fourth (+) semester than when in their third semester in the program. This increase in PA for men in their fourth (+) semester may be due to having more confidence and being able to accomplish tasks faster because they are more familiar with their responsibilities. Conversely, women reported personally accomplishing more in their third semester than in their fourth (+). Possibly, the decrease could be explained by a desire to transition from school into their family roles and responsibilities. Results from this study demonstrated no correlation for burnout with course load ($p = EE\pre 0.48\ post 0.55; DP\ pre 0.34,\ post 0.51; PA\ pre 0.98,\ post 0.10$), clinical assignment hours per week ($p = EE\ pre 0.08,\ post 0.25; DP\ pre 0.32,\ post 0.48; PA\ pre 0.52,\ post 0.43$), whether the clinical assignment was in- or out-of-season ($p = EE\ pre 0.01,\ post 0.09; DP\ pre 0.28,\ post 0.80; PA\ pre 0.36,\ post 0.13$), or for a diagnosed mental disorder, which did not have enough participants for data analysis. These four categories had been anticipated to have an effect prior to data collection. The course load not having a significant effect on the amount of burnout (EE, DP, PA) may be due to the fact that we were looking at burnout in the clinical assignment and not in the entire ATEP or just in the required courses. This lack of effect told us that total credit hours taken were not a factor for EE, DP, or PA. Course load, hours worked, and whether the clinical assignment is in- or out-of-season may prove to have an effect when not singling out the clinical education assignment. Not
having a significant effect with an assignment that was in- or out-of-season or the number of hours spent on the assignment per week may also be explained by the varying amount of hours that different sports have and whether they are in- or out-of-season, the hours still fluctuate. Two of the participants self-reported a mental disorder (1 male, 1 female) and both were taking medication to control for the disorder. For an individual with a diagnosed mental disorder, if a medication is being taken, the disorder should be controlled and thus not have a significant effect on burnout. Therefore these subjects were included in the total results, but with only two individuals, no definitive statements can be made regarding their specific causes of stress/burnout.

It is important to note that there are limitations to this study, most notably it was conducted with athletic training students at one western university only. Research should be conducted to see how these results compare to undergraduate athletic training students in other ATEPs. Further research should include a broader population of athletic training students from other schools with accredited athletic training education programs in other parts of the country.

Noting that there is burnout present in undergraduate athletic training students, an intervention may be needed to prevent burnout from occurring, especially in fourth (+) semester students. Specific interventions would have to be researched and tested, but possible interventions might include a break in the middle of the day, scheduled time off from the clinical assignment, an increase in praise/recognition from mentors/clinical instructors, or even a rewards system to keep the assignment interesting and increasing
work productivity. Also, undergraduate athletic training students should be looked at for burnout from their course work and from the entire ATEP, not just the clinical assignment. It may also prove beneficial to compare burnout of students in their last semester to first year professionals, to see whether the burnout in the last semester has an affect on the burnout in first year professionals.

Conclusions

In conclusion, this study showed that with moderate PA, low DP, and moderate EE undergraduate athletic training students, as a whole, demonstrated a moderate amount of burnout from their clinical assignments. Furthermore, it seems that the cumulative effect of the ATEP finally takes its toll in the fourth (+) semester showing a high/moderate degree of burnout. Marital/serious relationship status by gender, semester, and semester by gender interaction all had an effect on EE for both the pretest and the posttest telling us that these play a significant role in EE. For DP, marital/serious relationship status by semester interaction, semester, and semester by gender interaction were the only significant interactions/effects for both pre and posttests and were the only major explanations looked at. PA had no significant interaction/effects for both tests so PA was not influenced by variables included in this study.

Further research should be conducted to see if similar results are found with athletic training students at other ATEPs. Also, different aspects of the ATEP and the ATEP as a whole should be examined for influencing burnout. Additionally, possible interventions should be investigated to determine their influence in mitigating burnout.
References


20. Athletic training education overview.


Table 1: Participant Demographics

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Figure 1: Emotional Exhaustion Scores for Gender Effect and Pre/Post Testing
Figure 2: Emotional Exhaustion Scores for Gender by Serious Relationship Status Interaction
Figure 3: Emotional Exhaustion Scores for Semester by Serious Relationship Status Interaction

- **Mean Score**
- **Pre- Not Married/Serious**
- **Pre -Married/Serious**
- **Post- Not Married/Serious**
- **Post- Married/Serious**

- **Semester 1**: 
- **Semester 2**: 
- **Semester 3**: 
- **Semester 4+**:

- **Legend**:
  - Pre- Not Married/Serious
  - Pre -Married/Serious
  - Post- Not Married/Serious
  - Post- Married/Serious
Figure 4: Emotional Exhaustion Scores for Semester by Gender Interaction

- Pre- Male
- Pre- Female
- Post- Male
- Post- Female
Figure 5: Fourth (+) Semester Student Burnout Subset Scores for Pre/Post Testing
Figure 6: Depersonalization Scores for Semester by Serious Relationship Status Interaction

![Graph showing depersonalization scores for different relationship statuses across semesters]
Figure 7: Depersonalization Scores for Semester by Gender Interaction
Figure 8: Depersonalization Scores for Gender by Serious Relationship Status Interaction
Figure 9: Personal Accomplishment Scores for Semester by Serious Relationship Status Interaction

<table>
<thead>
<tr>
<th>Semester</th>
<th>Pre- Not Married/Serious</th>
<th>Pre -Married/Serious</th>
<th>Post- Not Married/Serious</th>
<th>Post- Married/Serious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 4+</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Legend:
- Pre- Not Married/Serious
- Pre -Married/Serious
- Post- Not Married/Serious
- Post- Married/Serious
Figure 10: Personal Accomplishment Scores for Semester by Gender Interaction

![Graph showing personal accomplishment scores for different semesters by gender interactions. The x-axis represents the semesters, and the y-axis represents the mean score. The graph includes lines for Pre-Male, Pre-Female, Post-Male, and Post-Female, with varying trends across semesters.](image)
Appendix A

Prospectus
Chapter 1

Introduction

Those who are in the health care fields are generally known for their hard work and long hours. These professionals are also known to suffer from burnout.\textsuperscript{1, 2} Burnout is defined as a psychological syndrome with three subsets, emotional exhaustion, depersonalization, and reduced accomplishment, that can occur among individuals who work with other people in some capacity.\textsuperscript{3, 4, 5} Athletic training is among those professions that tend to experience high stress loads and burnout.\textsuperscript{1, 6-9} It is known that they have long hours, little time off, and deal with all types of people. In order to become a certified athletic trainer (ATC) one must first complete an entry-level athletic training education program (ATEP). Within this program there are the general education courses that are required of most undergraduates along with foundational and professional courses, but there are also two years of clinical education experiences that must be completed.\textsuperscript{10} Research has revealed that the general undergraduate college student population experiences burnout.\textsuperscript{11} Yet, the research on undergraduates who are participating in an ATEP is very limited, although their education has increased responsibilities with the required clinical hours. Research has mainly focused on assessment of clinical experience hours, such as active learning time, engagement time, and clinical behavior.\textsuperscript{12} Many have speculated on whether there is burnout, but this research area needs to be expanded.\textsuperscript{1} The athletic training education program is a large commitment of time, even as an undergraduate, and the possible consequences of that time investment should be investigated.
Research Question

Do undergraduate athletic training students participating in an accredited athletic training education program (ATEP) experience burnout, and if so, to what extent, and what are possible causes?

Null Hypothesis

The following null hypothesis will be tested:

Undergraduate athletic training students participating in an ATEP do not experience burnout.

If the null hypothesis above is rejected, the following subset null hypotheses will also be tested:

1. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by marital or serious relationship status.

2. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by gender.

3. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by semester level in the ATEP.

4. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by the number of credits taken during a semester.

5. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by approximate hours spent on the clinical assignment.
6. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by whether the sport being worked with is in- or out-of-season.

7. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by a mental health disorder.

8. Burnout in undergraduate athletic training students participating in an ATEP is not increased or caused by taking or not taking medication for a mental health disorder if a mental health disorder is present.

Definitions

The following definitions will be used in this study:

Stress – a condition of emotional and/or mental challenge.\(^1,13\)

Burnout – a psychological syndrome of emotional exhaustion, depersonalization, and reduced accomplishment that can occur among individuals who work with other people in some capacity.\(^3,4,5\)

Emotional Exhaustion – feelings of being emotionally overextended and exhausted by one’s work.\(^4,5,14\)

Depersonalization – an unfeeling and impersonal response toward recipients of one’s service, care, treatment, or instruction.\(^4,5,14\)

Personal Accomplishment – feelings of competence and successful achievement in one’s work with people.\(^4,5,14\)

Maslach Burnout Inventory Human Services Survey (MBI-HSS) – a validated and reliable tool used to measure burnout in students and professionals.\(^4,5,14\)
Clinical Assignment – an athletic training student’s practicum experience, under the supervision of a certified athletic trainer.

Certified Athletic Trainer (ATC) – a highly qualified medical professional educated in preventing, managing, and rehabilitating injuries that result from physical activity; certified by the Board of Certification (BOC) by having passed the national certification examination.¹⁵

Athletic Training Education Program (ATEP) – an athletic training program which has received accreditation from the Commission on Accreditation of Allied Health Education Programs (CAAHEP).¹⁵

Assumptions

Assumptions within this study are as follows:

1. ATEP students will honestly report their feelings on the survey instrument
2. Data will be an accurate recording of the presence of burnout in athletic training students.

Delimitations

Delimitations for this study will include:

1. Only undergraduate athletic training students.
2. Only Brigham Young University (BYU) athletic training students.

Limitations

This study will be limited to:

1. Self-reported data gathered by a survey.
2. Inability to control outside factors of stress and burnout.
3. Inability to control accuracy of responses to the survey.

4. Inability to control completion of returned surveys.

*Significance of this Study*

This study will help to determine if athletic training students participating in BYU’s undergraduate athletic training program (ATEP) experience burnout, and if so, how much burnout is experienced. It will further expand the limited research on ATEP undergraduate students. The results of the study will help to answer questions concerning burnout in athletic training students and could provide insight into preventing professional burnout. This study may also be able to help with the improvement of how ATEPs structure the clinical education experiences of students. This is original research and needs to be completed before other research, such as possible intervention strategies, can be performed.
Chapter 2

Review of Literature

Search

The following search engines were used to identify the published literature related to this study.

Search Engines:

- PubMed: 1980 to 2005
- Ebsco: 1980 to 2005
- SPORTDiscus: 1980 to 2005
- CINAHL: 1980 to 2005

Within the search engines, the key words listed below were used to obtain the specific articles associated with the topic of study.

Key Words:

- Student stress
- Student burnout
- Student stress and burnout
- Professional burnout
- Attrition
- Athletic training students
- ATC stress and burnout
- ATC burnout
- ATC stress
- Factors relating to burnout
- Burnout
- Clinical Burnout
Introduction

Stress, a condition of emotional and/or mental challenge, is a common occurrence in individuals and is often particularly manifested in the occupational setting. Many occupations are well known for causing excess and constant stress, eventually leading to “burnout.” For the purpose of this study, burnout will be operationally defined as a psychological syndrome of emotional exhaustion, depersonalization, and reduced accomplishment that can occur among individuals who work with other people in some capacity. Some of the occupations where burnout is most prevalent include medical doctor, nurse, medical student, social worker, minister, and public servant. It is apparent that health care professionals are susceptible to an overload of stress and burnout. Athletic training is recognized by the American Medical Association as an allied health profession. Success in athletic training, like other health professions, demands large amounts of time and the emotional energy used to care for others. Objective measurements of burnout are obtained with instruments such as the Maslach Burnout Inventory.

Definitions

Stress is defined as an emotionally and/or mentally disruptive or upsetting condition, which occurs in response to adverse external influences and has the capability of affecting physical health. Burnout is said to be a “clash of unrealistic expectations.” It is “a reaction to chronic stress that involves negative interactions between environmental and personal characteristics.” Burnout is also defined as “emotional exhaustion.”
occurs “when an individual can no longer relieve the physical and mental symptoms related to continuous stress.” Succinctly, when stress is too frequent and significant, burnout may result. Stress is classified as "chronic distress," chronic being defined as continuing for a long period of time.

**Signs and Symptoms**

Signs and symptoms of burnout do not usually occur all at once, but over time. Although we are aware of the signs and symptoms of burnout, most people do not seem to realize that they are experiencing burnout until it has become advanced.

Signs and symptoms of burnout include:
- An increase in blood pressure;
- Inability to sleep;
- A drop in energy levels;
- More frequent tardiness or absence at work;
- Changes in mood;
- A negative attitude;
- Focusing on work and ignoring other aspects of life;
- Low self-esteem;
- Detachment;
- A lack of professionalism;
- Inability to cope with everyday life;
- Emotional exhaustion;
- Physical exhaustion;
- Depersonalization;
- Reduced personal accomplishment.

**Measurements**

Measurements of stress and burnout have been commonly obtained with the Maslach Burnout Inventory (MBI). The MBI is made up of 22 items. Each of the 22 items relates to one of three dimensions of burnout: 1) emotional exhaustion, 2) depersonalization, and 3) personal accomplishment. There are 9 items in the first
dimension, 5 in the second, and 8 in the third dimension. Individuals use a seven-point scale to indicate their frequency of experiencing job burnout related behaviors, feelings, and demands (0 = never; 6 = everyday). The presentation of the inventory should not involve reference to burnout but rather to job related attitudes or well-being. The inventory takes approximately 10-15 minutes to complete.

The MBI-HSS looks at burnout as a continuous variable with a scoring of low, moderate, and high range of experienced feelings. A high degree of burnout is demonstrated with high emotional exhaustion and depersonalization scores with a low personal accomplishment score. Moderate burnout demonstrates moderate scores with all three items, while low burnout is shown to have low depersonalization and emotional exhaustion scores and high depersonalization scores. General ranges for low, moderate (average), and high scores are 16 or less, 17-26, and 27 or greater, respectively. Each of the three items should be assessed individually and not be combined into one score. The MBI has been noted to show strong psychometric properties which include factorial, convergent, and discriminant validity. The MBI is the most generally accepted and widely used instrument to measure burnout.

Prevention

Managing stress in order to avert the possibility of burnout is the key to prevention. Stress can be managed a number of different ways. Exercise, diet, and sleep are three key ways to manage stress and minimize the potential of burnout. Together, these three will help ward off fatigue, frustration, anxiety, and depression while increasing self-discipline, self-esteem, and self-image. It is recommended that exercise
should be done at least every other day; diet should be balanced including eating breakfast and eating at least one hot meal a day; and sleep should not be disturbed. Hand in hand with sleep is relaxation. One must relax whether it is by simply breathing in and out for a few minutes, doing a fun new activity, such as yoga or other relaxing activities, or discovering a new interest.9

Time management and learning to cope with stress are also extremely important in preventing high stress and the possibility of burnout. With time management, planning, organization, and control are essential. Making a list of things to do for the day in order of importance is a good start. Schedule in time for making calls, doing paperwork, etc., along with something enjoyable each day so there is something to look forward to. Delegation can be a person’s breaking point. Things that can be done by other people need to be delegated to keep the workload at a manageable size.8,9

When it comes to coping with stress, a person must be aware of their stresses and what may cause burnout. Accepting that everyone has a different pace is essential. Learning to forgive and not hold grudges is always helpful along with keeping a good attitude and finding ways to reduce role conflict.8,9 Looking at and revising attitudes, duties for the day, and goals can also keep the self in check. Look at the good that has been done and the work that has been accomplished for the day and focus on those rather than the negative. Once in a great while, there may even be a need to change the type of job being done.9
Professional Application

Some stress is common in professional settings. At work, individuals may be presented with stress above and beyond the common everyday stresses of life. High levels of stress have been largely reported in service professions. These service professions may include, but are not limited to, counselors, physicians, ministers, lawyers, police officers, nurses, social workers, athletic trainers, and teachers.

Health care professionals are reported to have a higher than average stress load and are more prone to burnout.

Physicians have shown notable levels of burnout. Physical therapists have shown tendencies toward burnout at low to moderate levels. The nursing profession is also susceptible to burnout and has become more prevalent over the last few years. Burnout has become more prominent because of decreased enrollment in nursing programs along with an aging nurse population, and low numbers within the profession. These dedicated nurses tend to be overworked, which in turn leads to a decrease in quality of care for the patients and low job satisfaction for those nurses providing care.

There are also other professions outside of health care or the medical field that are high in stress and at risk for burnout. Accountants, during their busy season, have demonstrated more depersonalization than post-secondary educators and mental health professionals. In the emotional exhaustion category of the MBI, accountants had more exhaustion than physicians and social workers, and illustrated high levels of reduced personal accomplishment.
Athletic Training Application

Athletic trainers encounter many of the same stressors as other health care professionals. Certified athletic trainers are no strangers to the world of stress. As allied health professionals, certified athletic trainers have a high stress load and are prone to burnout.\textsuperscript{1, 6-9} ATCs must be present to setup, treat their athletes both before and after practice, provide therapy and rehabilitation, be on site during practices and competitions, teach or take classes, do paper work, and travel when necessary.

ATCs do more than just those tasks previously mentioned to assure the success of their athletes. ATCs work longer hours than the average employee. They are fortunate if they work only 40 hours per week. It is not uncommon for ATCs to work 80 hours or more in a week.\textsuperscript{1, 9, 17} With these long work weeks, ATCs suffer stresses which include lack of sleep, lack of personal or family time, lack of social opportunities, poor eating habits, and long physically and emotionally draining work days. This stress may build up over time. Compounding this problem, stressful work habits are often established in the first few years of a person’s career and can be hard to break later.\textsuperscript{1, 9} Stressful work habits may include poor balancing of responsibilities and an inability to limit hours. Many of these habits are established as the newcomer to the profession tries to impress colleagues by staying late or doing more work so as to show they are worth keeping. Often, by not knowing when to say no to extra work and not realizing they are doing too much, the stress builds up even more.\textsuperscript{1}

In addition, ATCs interact with coaches and athletes, as well as administrators and other people. These other people may include parents, physical therapists,
physicians/surgeons, and other allied health professionals. Most individuals the ATC interacts with are dealt with at a very personal and often delicate level.

These health care professionals also face constantly changing research and technology. Everyday, new research is completed in the athletic training field and the certified athletic trainer must stay up to date on these changes so they are able to provide the best and most recent care for their athletes. Additionally, ATCs may be teachers worried about lesson plans and how to present their information in a way students will understand and be able to apply in their clinical experience setting. The information they give to students in their lessons ultimately affects the type of athletic trainers these students will become.

Certified athletic trainers may have stress build-up from a lack of personal time, family time, and free time. Many of these men and women also have other obligations, such as professional affiliations (committees, conferences, etc.), families, and religious commitments. The lack of free time combined with the constant expenditure of energy into effort, and emotion in accomplishing their responsibilities leads to a large amount of stress that may eventually result in burnout.

Student Application

Professionals are not the only people with high stress. Students, like professionals, face high stress situations and burnout even before they reach the professional level. These students have many types of pressures that are placed upon them by others, by themselves, and by their environment.
Stress within the college student population, as one might imagine, is very common. In the student’s case, stress is classified as "chronic distress," chronic being defined as continuing for a long period of time. An experiment conducted by Ross et al on full-time college students found that stress was prevalent in the average college student. College students in general were found to encounter intrapersonal, interpersonal, academic, and environmental stresses. Ross et al concludes that intrapersonal stress is the largest source of distress in the average college student’s life. Intrapersonal stress, in this study, includes changes in sleeping habits, changes in eating habits, increased work load, disruption of vacations/breaks, and new responsibilities. Although non-college students may have similar stresses, it is dramatically increased in the college setting due to high expectations relating to grades and performance in the classroom.

So what happens when these characteristics of stress in full-time college students are combined with clinical education requirements? Stress continues to escalate and may eventually lead to burnout. Nursing students have been shown to have significantly more stress during their preceptorship and academic experience than their first year of employment. This can cause an inability to integrate and learn. Research has found that these nursing students have burnout comparable to professional nurses. They often give up sleep, exercise, proper nutrition, and their social lives and experience burnout due to their responsibilities.

Clinical hours are required of physical therapy students as well. Physical therapy students have demonstrated significantly high stress levels pertaining to their academics
compared to non-physical therapy students.\textsuperscript{27-29} High levels of emotional exhaustion were predominant in these students.\textsuperscript{27}

Medical students often have several hours of clinical work each day along with studying.\textsuperscript{23} They frequently have higher levels of psychological distress than the general population. Medical students also feel stressed, which makes them susceptible to burnout.\textsuperscript{23}

Athletic training programs also require their students to have clinical education experience in addition to their coursework, resulting in a significant increase in time commitment over students in other courses of study which do not require clinical hours. An ATEP requires both foundational and professional courses along with two years of clinical education hours. The following fundamental and professional courses are required:

<table>
<thead>
<tr>
<th>Foundational Courses</th>
<th>Professional Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human anatomy</td>
<td>Risk management and injury/illness</td>
</tr>
<tr>
<td>Human physiology</td>
<td>Pathology of injury/illness</td>
</tr>
<tr>
<td>Exercise physiology</td>
<td>Assessment of injury/illness</td>
</tr>
<tr>
<td>Kinesiology/biomechanics</td>
<td>General medical conditions and disabilities</td>
</tr>
<tr>
<td>Nutrition</td>
<td>Therapeutic modalities</td>
</tr>
<tr>
<td>Statistics and research design</td>
<td>Therapeutic exercise and rehabilitation</td>
</tr>
<tr>
<td>Strength training and reconditioning</td>
<td>Health care administration</td>
</tr>
</tbody>
</table>
Athletic training students spend large amounts of time with their athletes besides all the coursework they must complete. They must be present to setup, treat their athletes both before and after practice, provide therapy and rehabilitation, be on site during practices and competitions, do paper work, travel when necessary, and much more, in addition to their coursework. Educational courses for athletic training students include both fundamental and professional courses such as those identified above.

These tasks are very time consuming. Moreover, there is less vacation and break time because the athletic season is sometimes longer than the school year. There are rarely off-seasons, and seldom days off from practice.\(^7\)

This added time commitment often requires the athletic training student to perform more work and study than other students, but in the same amount of time. The result may be less sleep for the athletic training student because there isn’t adequate time to do everything that is needed. With so much to do during a day, the athletic training student has limited time to eat. As such, eating is often done quickly,\(^2\) which means the food consumed may not be healthy or in the proper quantities. There is also less time for the student to deal with personal relationships and family concerns. A student may feel
stressed due to time constraints causing a lack of a social life outside of athletic training. Students also have financial challenges.\textsuperscript{17} Between the required educational courses and the equally important clinical experience,\textsuperscript{19} there may be little or no time left for a paying job to be able to pay for the expenses of daily living and education.\textsuperscript{17}

Exceptionally large time demands are not the only added stress. Athletic training students have pressures to excel in the classroom, not just in their clinical settings.\textsuperscript{2,17} They also have to handle the normal demands of life, such as relationships, family issues, paying bills, finding housing, and grocery shopping.

Stress is prevalent in all aspects of life for these hard working students. Stress may result from the student dealing with the attitudes of athletes as well as coaches, and from trying to communicate effectively with them in a way that will keep them happy and healthy. Dealing with and managing the various types of personalities of athletes and coaches at this level is likely a new experience for these students.

When evaluating athletic training students, Reed and Giacobbi found that stress might also result when a student is comparing or contrasting duties of other students.\textsuperscript{30} Examples of this may include someone thinking they do more than another person, perceiving that someone else does more than they do, or imposing self pressure to do more in order to be recognized. There may also be some stress from wondering and worrying about a potential job or career or being uneasy about the direction of their future.\textsuperscript{2} Along with these concerns, are the pressures these students put upon themselves including their own expectations, goals, and dreams. Carrying the burden of too many of these stresses for too long may lead to burnout.
Over the last two decades research has started to expand on stress and burnout in health care professionals, graduate health care students, and undergraduate students. However, there has been very little research done on undergraduate athletic training student stress and no research on undergraduate athletic training student burnout. The following is a summary of stress and burnout literature.

Table 1: Summary of stress and burnout literature.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Population</th>
<th>Tool</th>
<th>Outcome</th>
<th>Time Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balogun et al.</td>
<td>1999</td>
<td>Physical Therapy students</td>
<td>MBI</td>
<td>Moderate Burnout</td>
<td>Semester</td>
</tr>
<tr>
<td>Wandling et al.</td>
<td>1997</td>
<td>Physical Therapists</td>
<td>MBI</td>
<td>Low-Mod Burnout</td>
<td>Single Sample</td>
</tr>
<tr>
<td>Donohoe et al.</td>
<td>1993</td>
<td>Physical Therapists</td>
<td>MBI</td>
<td>Moderate Burnout</td>
<td>Single Sample</td>
</tr>
<tr>
<td>Sweeney et al.</td>
<td>2002</td>
<td>Accountants</td>
<td>MBI</td>
<td>Med-High Burnout</td>
<td>Season</td>
</tr>
<tr>
<td>Ross et al.</td>
<td>1999</td>
<td>Students</td>
<td>SSS*</td>
<td>Significant Intrapersonal Stress</td>
<td>Single Sample</td>
</tr>
<tr>
<td>Rowe et al.</td>
<td>1998</td>
<td>Healthcare Providers</td>
<td>MBI</td>
<td>Stress/Anxiety Predict Burnout; Mod Burnout</td>
<td>Single Sample</td>
</tr>
<tr>
<td>Reed et al.</td>
<td>2004</td>
<td>Graduate ATC students</td>
<td>Interview</td>
<td>Many Stress Sources</td>
<td>Tri-Sample</td>
</tr>
<tr>
<td>Capel SA</td>
<td>1986</td>
<td>ATCs</td>
<td>MBI</td>
<td>Moderate Burnout</td>
<td>Single Sample</td>
</tr>
<tr>
<td>Hendrix et al.</td>
<td>2000</td>
<td>ATCs</td>
<td>MBI</td>
<td>Moderate Burnout</td>
<td>Single Sample</td>
</tr>
</tbody>
</table>

*SSS - Student Stress Survey.

Summary and Conclusions

Athletic trainers are typically in constant motion. They always have something to do or have somewhere to go. They are always needed and they are expected to be available and well prepared at any time. An ATC must be on site before, during, and after practices and games. Not only are ATCs required to be present at practices and games, but athletic training students assigned to that specific sport must also share the time commitment and responsibilities. These shared responsibilities include, but are not limited to, set up, treatments and taping prior to activity, caring for any medical needs
during practice, treatments afterward, rehabilitation, traveling, injury reports and other paperwork, and meetings with coaches. With such a litany of responsibilities on ATCs and athletic training students’ agendas, it is no wonder that they have stressful lives and may be prone to burnout.

There has been considerable research that has investigated the presence of burnout in a variety of professions. Studies have also been conducted which focused on students and burnout. However, there is very little published research that focuses on athletic training students and how much stress they have, and if this stress leads to burnout. These students must cope with everyday college life stresses and with the responsibilities required of them in their chosen major and future occupation. Each of these students is the future of the athletic training profession and with the risk of burnout in the profession, we need to know if the stress and burnout initiates in their educational experiences. This knowledge may facilitate the athletic training professionals’ future.
Chapter 3

Methods

The recognition of the existence of burnout among health professionals has opened our minds to the existence of burnout in those who are not yet professionals, but are in the process of becoming such. Nursing, medical, and other healthcare students who complete clinical education experience have shown evidence of burnout.\textsuperscript{16, 23, 27-30} The general college student population continues to show evidence of the occurrence of burnout.\textsuperscript{11} Undergraduate athletic training students appear to have many and varied responsibilities and could be experiencing burnout. This research should provide an understanding of whether athletic training students are experiencing burnout in their undergraduate athletic training education programs.

Design

This study of burnout is descriptive correlational research. The data will be collected by a modified MBI survey instrument. The study will be conducted to determine the presence of burnout and if so, the amount of burnout present in undergraduate athletic training students in the ATEP at Brigham Young University. The research will also determine to find possible causes of burnout if present.

Participants

All undergraduate athletic training students in Brigham Young University’s accredited undergraduate athletic training education program (ATEP), who have clinical assignments, will be asked to participate in this study. Participation will be voluntary. There will be approximately 70 students who will be subjects. Participants will be both
male and female and are college-aged. Athletic training students will be grouped according to their semester in the ATEP program. The ATEP program is two years and so the groups will be 1st semester students, 2nd semester students, 3rd semester students, and 4th semester students. The group of 4th semester students will also include all the other athletic training students in the ATEP program who have been in the program more than 4 semesters. Approval to conduct this study will be obtained from the Institutional Review Board prior to data collection. All participants will sign an informed consent form acknowledging their understanding of their involvement in this study. Participants were chosen for the following reasons:

1. Involvement in an accredited undergraduate athletic training education program.
2. Participation in a clinical assignment.
3. Brigham Young University has a large undergraduate athletic training program.
4. The population is convenient for those involved in the research.
5. The University is a Division I school with a high expectation of certified athletic trainers and athletic training students.

**Instrument**

A modified Maslach Burnout Inventory Human Services Survey (MBI-HSS) will be used to gather data on athletic training student burnout. Modifications will be made to be more focused on athletic training students. These modifications will include word changes such as “job” to “clinical assignment” and “recipient” to “athlete.” Approval and
With 22 questions, this survey will evaluate whether athletic training students are experiencing burnout and if so, how much burnout is occurring in the three subsets; emotional exhaustion, depersonalization, and personal accomplishment. Each of the 22 questions relates to one of these subsets and is answered using a 7-point scale of frequency which interprets into intensity (low, moderate/average, high). What is causing the burnout, if found to be present, will also be assessed through demographic and status questions. These questions will inquire about the presence of a clinically diagnosed mental disorder and whether medication is being taken, marital and relationship status, semester credits being taken, semester in the ATEP, gender, approximate hours spent at their clinical assignment in a week, and whether their assigned sport is in or out of season. The MBI-HSS is a validated and reliable instrument, and is one of the most commonly used measuring tools to determine professional burnout.\textsuperscript{4, 5, 14}

**Procedures**

Written permission will be obtained from each student for inclusion in this study. Permission will also be obtained from the instructors of Brigham Young University’s EXSC 394, 395, 494, and 495 classes (athletic training clinical education classes for the various levels of students in the program 1,2,3,4(+), respectively) to include the survey in the respective class with the understanding that no grade or incentive will be given. The survey will merely be given during these classes to insure all surveys are given out to each student and maximizing the return rate of the survey instrument.
Participants will take the modified MBI-HSS twice in a ten week period. The first survey will be taken during the third week of the winter 2006 semester and the second, nine weeks later, during week twelve of the same semester. The survey will be taken during the respective athletic training clinical education class. Written instructions on how to fill out the survey will be read to each class to ensure the consistency in instruction. Each subject will be assigned a number and will identify themselves with this number by writing it on the top of the survey. A master copy will be made of each participant and their associated number.

**Measurements Obtained**

The measurements obtained in this study will include scores from the three dimensions of burnout: depersonalization, emotional exhaustion, and personal accomplishment. Other measurements included will be the number of university credits taken during the semester of participation in this study, semester in the ATEP, the average hours per week spent in the clinical assignment, and whether the assigned sport is in- or out-of-season. Marital/serious relationship status and gender will also be determined along with presence of a mental disorder and current medication being taken.

**Analysis**

The burnout consensus on athletic training student well-being will be reported through an analysis of covariance with categorical independent variables and continuous covariants for marital/engagement status, mental disorders and medication being taken, and gender will be made for depersonalization, emotional exhaustion, and reduced personal accomplishment. Post-hoc testing will be done when necessary. Data will be
analyzed and the results will be recorded. From the results and conclusions, an
assessment will be made concerning the status of burnout in undergraduate athletic
training students.
References


