Burnout Rates in Undergraduate Athletic Training Students Compared to the Burnout Rate of Certified Athletic Trainers: A Comparative Study

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Abstract

Burnout was first described in 1974\(^1\), since then the condition has been researched and studied numerous times. The health care field has experienced this condition at a very high rate, and Athletic Training as a profession has been affected. Burnout has become so prevalent in the health care field because of the high stress situations, heavy workload, and emotionally draining work environments. The profession of Athletic Training has been significantly affected by this condition, many Athletic Trainers (AT) experience burnout over the course of a calendar year. Seemingly every AT has been affected by burnout personally, known a colleague who has struggled with burnout, or even succumbed to burnout and changed professions\(^4\). This far reaching condition is even affecting undergraduate students in Athletic Training Education Programs (ATEP), but little is known about the degree to which students are affected. Students are affected at the same rate as the Certified AT (ATC), who has experience in the field, as well as years of life experience, stronger coping mechanisms, stronger social support, and/or organization support\(^3,10,12,15,18\). Therefore, the purpose of this study was to assess the level of burnout in undergraduate AT students compared to the level of burnout in Certified Athletic Trainers. Undergraduate AT students (ATS) and ATCs were surveyed using a Maslach Burnout Inventory (MBI) and basic demographic items to assess level of burnout and to compare the two groups to find any correlation. This study determined that ATS and ATC have a comparable level of emotional exhaustion, depersonalization and personal accomplishment. The information from this study must be applied by ATEPs in order to better prepare students for the clinical setting not only in care of athletes, but in care for themselves.
Introduction

Burnout has been a largely studied condition in recent years; many articles have been written on the subject of Burnout. Burnout has been described by Freudenberger. This condition has become a large problem for all healthcare fields, AT included. Burnout is very hard to define, as it is experienced differently by all; however Burnout is generally recognized to have three components: emotional exhaustion, depersonalization, and reduced personal accomplishment. This condition is common in the health care field; especially in AT's, who are typically under-appreciated and modestly compensated for services provided. This overall definition was originally determined by Maslach, and was the basis for the MBI. Burnout is caused by both personal and environmental factors, these factors alone do not cause burnout, but when coupled together in high stress situations the condition may occur. There are multiple factors which can contribute to the occurrence of this condition. The high stress environment of the athletic training profession, which typically is high in job stress may be one of the first factors that starts the cycle of burnout, which unfortunately is cyclical in nature. Working for long periods of time, at a high level of mental focus and emotional involvement can be a contributing factor to burnout. High levels of job stress tends to be the first step in a process that ultimately leads to an individual experiencing burnout. After one has progressed for the first step, the individual will progress into the burnout stage. Once this has occurred the classic three part definition of burnout is used, which is emotional exhaustion, depersonalization, and reduced sense of personal accomplishment. These three facets can each be uniquely defined. Emotional
exhaustion is when the individual stressors of the job cause an inability to cope with work problems which causes the individual to use all emotional and physical resources to fight the exhaustion, and this causes workers to feel that they can no longer give of themselves at a psychological level. Depersonalization is represented by the negative response to various aspects of the job, which presents in unfeeling, cynical and negative feelings, and impersonal responses toward the patients (athletes) receiving care for the individual. The final facet is reduced personal accomplishment which is characterized by a lack of feeling competent, successful, and achievement in the individuals work, as well a tendency to evaluate oneself negatively.

Research has been conducted on burnout experienced by ATCs, and there is a good deal of research in support; however not much research has been conducted on Undergraduate ATSs, and this research has shown that ATSs are indeed experiencing burnout. Possible causes for burnout in ATS is the level of frustration exhibited by ATS during the undergraduate experience. One study showed that during the undergraduate ATS career students faced four main frustrations, which were stress in completing an ATEP, interactions of students with classmates, faculty, and preceptors, monotonous clinical experience, and sense of doubt for entering the AT profession. These frustrations could lead to burnout in ATS. Other studies have shown frustrations of ATS include: lack of respect by student athletes and coaching staffs, demands of clinical experience, and not having the opportunity to apply their skills daily. Correlations between ATC burnout and ATS burnout have yet to be made.
Methods

Participants

66 undergraduate Athletic Training students, 23 males and 43 females, from Commission on Accreditation of Athletic Training Education (CAATE) undergraduate ATEPs -in the state of Ohio, as well as 13 faculty of the ATEPs and AT staff, 4 males and 9 females, at the institution participated in this survey based study. Each NCAA Division was represented as well as NAIA Division 2 was represented. Not all students were included in the study, as an exclusion criteria was that students must have advanced in to the second year of the ATEP. This resulted in 29 second year students, 21 third year students, and 16 fourth year students. 7 ATEP directors, 1 head Athletic Trainer, and 5 assistant athletic trainers participated. Institutional Review board approval was obtained before data collection commenced. Each participant was informed of risks associated with participation, and provided informed consent before participating.

Research Design

An email sent to the ATEP director and Head Athletic Trainer at the institution contained a link for participants that directed them to the survey. All information was electronically stored, and did not contain any information that could be traced to any individual participant, ensuring total privacy. The survey contained 7 demographic questions specifically for ATSs, 7 demographic questions specifically for ATCs, and the Maslach Burnout Index (MBI) for both groups. The MBI was used because it has been proven to be effective in recognizing the three main constructs of Burnout: emotional
exhaustion, depersonalization, and sense of personal accomplishment. Emotional exhaustion is characterized by feelings of being emotionally exhausted and overextended. Depersonalization is characterized by a lack of concern or unfeeling responses toward others, such as colleagues or patients. The final construct is personal achievement, which is the feeling that challenges have been overcome or a sense of completion. The demographic information for ATSs addressed gender, status in ATEP, NCAA Division, extra-curricular activities, sport covered, credit load, clinical rotation location, and hours logged per week. The ATC survey demographic information addressed gender, years of experience, NCAA Division, average hours worked per week, job title, primary sport covered. The demographic information entailed close and open ended questions, whereas the MBI was be assessed on a 7-point Likert scale, anchored by 1 (Never) and 7 (Every day). A sample of the survey is seen in Table 1, as well as a basic MBI in Table 2.

Table 1

<table>
<thead>
<tr>
<th>1. Evaluate the following statements.</th>
<th>Never</th>
<th>A few times a week</th>
<th>Once a month or less</th>
<th>A few times a month</th>
<th>Once a Week</th>
<th>A few times a week</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel emotionally drained from my work</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel used up at the end of the day</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I feel tired when I get up in the morning and have to face another day</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>I can easily understand how patients feel about things</td>
<td></td>
<td></td>
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</tbody>
</table>
Table 2

Qualitative questions for the ATS revealed that the average credit hour load was 15.1 credit hours for second year students, 15.5 credit hours, and 14.7 credit hours for 4th year students. Average clinical hours for second year students was 24.2 hours, for third year students, 20.9 hours and for fourth year students 18.6 hours. 52% of students had clinical rotations on-campus at their institution, while the remaining 48% had off-campus clinical rotations. 71% of students reported being active in extra-curricular activities.

Qualitative questions for the ATC revealed that the average hours worked in a week was 50 per work week. Sport coverage for ATCs included soccer, baseball, basketball, softball, volleyball, Cross Country/Track and Field, and football, while five ATCs reported having no clinical coverage responsibilities. ATCs were asked how many years they had been a Certified Athletic trainers, this data can be seen in Table3.
Results

A one way ANOVA was performed to test for difference between students (2nd, 3rd, and 4th year) and professionals, and independent t-tests were done to determine gender differences on the three subscales of burnout: emotional exhaustion, depersonalization, and personal accomplishment. The p-value for each test was set at $p = .05$. All 66 students and 13 professionals completed the survey and gave informed consent.

Table 3

<table>
<thead>
<tr>
<th>Years as Certified Athletic Trainer</th>
<th>0-1 years</th>
<th>3-5 years</th>
<th>6-10 years</th>
<th>11-15 years</th>
<th>16-20 years</th>
<th>21+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1 years</td>
<td>0.5</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>3</td>
<td>3.5</td>
</tr>
<tr>
<td>3-5 years</td>
<td>3</td>
<td>3</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>6-10 years</td>
<td>1.5</td>
<td>1.5</td>
<td>2</td>
<td>1.5</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>11-15 years</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1.5</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>16-20 years</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>2</td>
<td>2.5</td>
<td>3</td>
</tr>
<tr>
<td>21+ years</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

The Maslach Burnout Index was used to assess the level of emotional exhaustion, depersonalization, and personal accomplishment. Each individual MBI was scored and recorded to be input for statistical analysis. A one way ANOVA was performed to test for difference between students (2nd, 3rd, and 4th year) and professionals, and independent t-tests were done to determine gender differences on the three subscales.
of burnout: emotional exhaustion, depersonalization, and personal accomplishment.
The p-value for each test was set at $p=0.05$.

**Emotional Exhaustion**

The first subscale of the MBI determines the level of emotional exhaustion experienced by the participant. Examples of items addressing this are "I feel frustrated by my job" and "I feel emotionally drained from my work". The mean score of this subscale was high for professionals and students, each year surveyed, but there was no statistical significance ($p=0.489$) between the scores, which indicates all groups experience this at the same rate. There was no statistically significant difference between professional male and female emotional exhaustion ($p=0.89$). The independent t-test done on male and female student emotional exhaustion showed a statistically significant (difference $p=0.013$) indicating that male students experienced a lesser degree of emotional exhaustion.

**Depersonalization**

The second subscale of the MBI is used to determine the frequency in which an individual has an impersonal response to another's need, care, or treatment\textsuperscript{15}. Examples of items addressing this are "I have become more callous towards people since taking this job" and "I do not really care what happens to some clients". Mean scores for depersonalization were both in the moderate range for professionals and all levels of students (2nd, 3rd, and 4th year). The one-way ANOVA confirmed that there was not a statistical significant difference in the scores ($p=0.671$). Independent t-test on male and female professionals in regards to depersonalization indicated no statistically
significant difference ($p=.44$). The independent t-test performed on male and female student depersonalization also showed no statistically significant difference ($p=.194$).

**Personal Accomplishment**

The third and final subscale of the MBI is used to determine feelings of personal accomplishment. This subscale is scored in the reverse of the first two, meaning that a higher score would indicate lower burnout. Examples of items addressing this are "I have accomplished many worthwhile things in this job" and "I feel I am positively influencing other people's lives through my work". The mean score for both professional and students showed high levels of personal accomplishment, which indicates lower levels of burnout. The one-way ANOVA on professionals and students revealed no statistically significant difference ($p=.257$) which indicated that all groups had high levels of personal accomplishment. Independent t-test on male and female professionals did not reveal any statistically significant difference ($p=.416$). However the independent t-test comparing male and female students showed a statistically significant difference ($p=.026$ and $F=.204$). Female students were shown to have higher levels of personal accomplishment than male students.

Table 4 Average MBI by group
Table 5 Average Professional MBI Male vs. Female

Table 6 Average Student MBI Male vs. Female
Discussion

The purpose of this study was to determine the rate at which burnout is experienced by undergraduate ATS, and to compare this rate to the established rate of ATCs. A secondary purpose was to evaluate the differences between males and females. The initial hypothesis was that students would have a higher rate of burnout, however the study has shown that students have a rate comparable to that of ATCs. The prevalence of burnout in ATCs has been studied frequently as mentioned earlier in this report, and the rate of burnout discovered in this study is very similar to that reported in much of the literature that has been published on the subject.1,2,4,515,19,20

The MBI data has been examined using statistical analysis, showing that there is not a statistical difference in any of the three subscales of burnout for students when compared to professionals. Both groups exhibited scores in the high range for emotional exhaustion, the moderate range for depersonalization and the high range for personal accomplishment, a high score is indicative of lower burnout. The qualitative
data when compared shows that, although vastly different in responsibilities; professionals have much more administrative responsibilities, as well as the need to provide for themselves or family members, students however must attend classes, complete coursework, as well as attend to clinical responsibilities, which can entail some administrative work in the Athletic Training area (injury reports, rehabilitation forms, data entry).

When comparing workloads the ATC works an average of 50 hours per week, while the student averages 23.12 hours. However the student also must attend classes, an average credit load of 13.73, this when coupled with clinical responsibilities may contribute to student burnout. Factors that could contribute to student burnout can be divided into three groups: clinical responsibilities, course work, and class load. The clinical responsibilities can be very stressful to students, as seen in the MBI. Clinical responsibilities include travel with teams, which may cause students to miss classes, as well as the necessity to teach themselves material; however these responsibilities can also be rewarding, as evidenced by the high personal accomplishment sub-score. However these rewarding experiences can occur infrequently, which is the case for both students and professionals. Course work is a factor because once students are done with clinical responsibilities for the day, they must then return to life as a normal student, this means, projects, term papers, and preparation for examinations or if an ATS is travelling they must do coursework on the road, often on a bus trip, or in a hotel lobby. Often students will have projects in core classes, where they must collaborate with other ATSs, which can be troublesome due to differing clinical schedules. Class load may be
another factor not only because of busy schedule but also difficult subject material and demands on students from multiple credit hour courses.

This study was limited in comparison by lack of qualitative questions from which to draw common themes, which could be used to connect stressors for ATS and ATCs. Sample size was also a limitation for this study, as ATC numbers, particularly ATEP directors who do not have clinical responsibilities, could skew the overall score. A pre-test post-test design would have been beneficial in determining how large an effect coursework has on students, as later in the semester students may have more coursework responsibilities to attend to.

**Conclusion**

ATSs and ATCs involved in this study both showed moderate levels of burnout: high level of emotional exhaustion, moderate depersonalization, and high personal accomplishment. Comparison in level of MBI score showed that ATSs and ATCs are very similar in rate of burnout, possibly due to clinical responsibilities, coursework, as well as outside demands.

There is still a need for further study of ATSs burnout, as well as need for instruction of coping strategies to prevent or limit burnout in the next generation of Athletic Trainers. Burnout, as a phenomenon, has a wide impact on the Athletic Training profession, causing many to seek change in profession. The importance of coping strategies may reverse that trend, leading to more ATCs and to better quality of care for athletes. Further research must be conducted on both ATS and ATC coping
strategies in order to determine the best course of action to limit this debilitating phenomenon.
References


Appendix A

CONSENT FORM FOR EXPERIMENTAL STUDIES

TITLE: Burnout Rates in Undergraduate Athletic Training Students Compared to the Burnout Rate of Certified Athletic Trainers: A Comparative Study

OPENING PARAGRAPH:
I agree ________________________________ to take part in a research study titled ("Burnout Rates in Undergraduate Athletic Training Students Compared to the Burnout Rate of Certified Athletic Trainers: A Comparative Study), which is being conducted by (Aaron Wass, Athletic Training Student, Cedarville University, (616-550-7687) under the direction of Michael Weller (937-766-3205) – CU Faculty Advisor. My participation is voluntary; I can refuse to participate or stop taking part at any time without giving any reason, and without penalty. I can ask to have information related to me returned to me, removed from the research records, or destroyed.

REASON/PURPOSE:

The purpose of this study is to determine if running injuries among cross country runners becomes more prevalent as mileage is increased from high school to college.

BENEFITS:

Participants will not directly benefit from this research.

COMPENSATION/COSTS/REIMBURSEMENT:

Participants will not incur any costs, and will not receive any compensation or reimbursement.

PROCEDURES:

If I volunteer to take part in this study, I will be asked to: complete an online survey. This survey will be completed in one sitting and should take no more than 20 minutes.

DISCOMFORTS OR STRESSES:

No discomforts or stresses are expected.
RISKS:

No risks are expected.

CONFIDENTIAL, ANONYMOUS, OR PUBLIC:

Information will not be released to any other party for any reason. Internet communications are insecure and there is a limit to the confidentiality that can be guaranteed due to the technology itself. However once the materials are received by the researcher, standard confidentiality procedures will be employed.

FURTHER QUESTIONS:

The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by telephone at: 616-550-7687

FINAL AGREEMENT & CONSENT FORM COPY:

By continuing to the survey I indicate that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study.

IRB OVERSIGHT PARAGRAPH:

Additional questions or problems regarding your rights as a research participant should be addressed to Dr. Dennis Sullivan, Chair, Institutional Review Board, Cedarville University, Cedarville, OH 45314; Telephone (937)766-7573. Email Address: IRB@cedarville.edu
Appendix B

Burnout Student Survey
What is your gender?
   Female or male
What year are you in the Athletic Training Education Program?
   2nd, 3rd, or 4th
What level of NCAA is your institution?
   Division 1, 2, or 3
What is the number of credits you are taking this semester?
   Fill in box for specific number
What setting is your clinical rotation located?
   On-campus or off-campus
How many clinical hours do you log on average each week?
   Fill in box for open ended answer
Are you involved in extracurricular activities?
   Yes or No
Please choose one of the options that best represents how you currently feel:
I feel emotionally drained from my work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
2) I feel used up at the end of the day
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
3) I feel tired when I get up in the morning and have to face another day at work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

4) I can easily understand how clients feel about things
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

5) I feel I treat some clients as if they were impersonal objects.
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

6) Working with people all day is a real strain for me
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

7) I deal effectively with the problems of clients
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

8) I feel burned out from my work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

9) I feel I am positively influencing other peoples' lives through my work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

10) I have become more callous toward people since I took this job
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

11) I worry that this job is hardening me emotionally
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

12) I feel very energetic
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

13) I feel frustrated by my job
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

14) I feel I am working too hard on my job
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

15) I don't really care what happens to some clients
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

16) Working with people directly puts too much stress on me
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

17) I can easily create a relaxed atmosphere with clients
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

18) I feel exhilarated after working closely with clients
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

19) I have accomplished many worthwhile things in this job
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

20) I feel like I am at the end of my tether
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

21) In my work, I deal with emotional problems very calmly
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

22) I feel clients blame me for some of their problems
Burnout Professional Survey

What is your gender?
   Female or male

How many years have you been a certified athletic trainer?
   0-2, 3-5, 6-10, 11-15, 16-20, 21+

What level of NCAA is your institution?
   Division 1, 2, or 3

How many hours do you work in an average week?
   Fill in box for open ended question

What is your position at the institution?
   ATEP program director, Head athletic trainer, assistant athletic trainer

What sport do you primarily cover?
   Fill in box for open ended answer

Please choose one of the options that best represents how you currently feel:

I feel emotionally drained from my work
   Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
   2) I feel used up at the end of the day
      Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
   3) I feel tired when I get up in the morning and have to face another day at work
      Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
   4) I can easily understand how clients feel about things
      Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day
5) I feel I treat some clients as if they were impersonal objects.
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

6) Working with people all day is a real strain for me
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

7) I deal effectively with the problems of clients
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

8) I feel burned out from my work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day

9) I feel I am positively influencing other peoples' lives through my work
Never-A few times a week- once a month or less- a few times a month- once a week- a few times a week- every day