



library@chuka.ac.ke; www.chuka.ac.ke

ATHLECTIC TRAINERS IMPACT ON ATHLETEES: A CASE STUDY OF UNITED STATES

*Jonathan Kathenge**
Chuka University

*jkathenge@chuka.ac.ke

Citation:

Kathenge J., (2024). Athletic Trainers Impact On Athletes: A Case Study of United States. In: Mutembei Henry, Nduru Gilbert, Munyiri Shelmith, Gathungu Geoffrey, Kiboro Christopher, Otiso Wycliffe, Rithaa Jafford, Miriti Gilbert, Gichumbi Joel, Mwathi David, Gitonga Lucy, Nanua Jackin, Kahindi Roseline, Jonathan Kathenge & Muthui Zipporah (Eds.). *Proceedings of the Chuka University 10th Annual International Research Conference held in Chuka University, Chuka, Kenya from 5th to 6th October, 2023*. 490 - 495 pp.

ABSTRACT

With upcoming of the competency-based education and the increasing ailments directly or indirectly connected with climatic change and weather patterns globally, physical exercise has become increasingly necessary, which directly or indirectly calls for increased uptake of physical education in schools, colleges and the greater public. This view necessitated this study which focuses one component of physical education. The study was carried in the United States with its focus being the athletic training industry to critically examine the impact of athletic trainers to the athletes, both physically and mentally. The main focus of the study was to examine Athletic trainer's role in the athlete's mental wellbeing. It also looked into the athlete's trust to his or her athletic trainer not only in their expertise in the field and their knowledge, but also how the trainer is focused on what is best for the athlete's long-term health and well-being. The study was motivated by a belief that athletic trainers are usually held with high standard both off the field and in the field especially where everyone can directly see their performance. However, it is not common knowledge in the public domain what the athletic trainers do to help the athletes in terms of injury prevention as well as treating already incurred injuries. Data was obtained from primary and secondary sources. For primary sources, data questionnaires were administered online to purposively chosen participants while secondary data was sourced from written works and documented reports. Descriptive data analysis was used and the results used to draw conclusion and recommendations. The study findings indicated that the relationship between a student-athlete and athletic trainer is pivotal during the grind of a season and even the off season. The athletic trainer must work with the student-athlete and build trust with them along with the coaching staff and administration which is not easy to do. The findings and conclusion from the study recommends a need for a clearer answer on the impact that athletic trainers have on student- athletes, with a better way to show the actual relationship between the two.

Keywords: Competency-Based Education, Physical Education, Athletic Training, Mental Wellbeing, Injury Prevention, Athlete Trust, Physical Health, Athletic Trainers.

INTRODUCTION

Athletic Training has become more and more of a popular topic over the years. With ailments associated with weather patterns as a result of climatic change as well as the popularity and income generation from athletics and professional sports, it is becoming necessary for colleges and teams to have the best athletic trainers among their staff and students. Professional athletes are also increasingly in need of personal trainers in the off or holiday season. Athletic trainers mostly specialize in preventing, diagnosing, and treating injuries. According to the National Athletic Trainers Association of the United States, by the end of April 2021, there were 44,000 registered members of athletic trainers

in the US. Among this number, over 27,000 athletic trainers were already in formal employment in the United States. The National Athletic Trainers Association records indicate the average age of an athletic trainer in the US as 39 years old (NATA, April 30, 2021.). High number of Athletic trainers are mainly in education, followed by private companies, with the government having the least number of athletic trainers (NATA, April 30, 2021). This raises the question of why there is number of Athletic Trainers and their role or importance to the athletes performance, well-being and person centered care. The objectives of the study were to find out the role of athletic trainers in the success of athletic teams, what motivates athletic trainers in their study and performance of their work and to investigate the impact of athletic trainers on athletes' performance and morale

METHODOLOGY

This research was a partly quantitative and qualitative study. The participants included both athletes and athletic trainers at the collegiate level. The type of sample that was used was a two-part quantitative survey/questionnaire. For the athletic trainer, the demographic questions included race, gender, and age. The athlete section demographic questions included race, gender, and class status. The instruments of the sample was two-part survey, with the first half being for the athletic trainers, and the second being for the student-athletes. The beginning of the survey was quantitative to generate percentages but used checkbox types of questions for the demographics. The first part of the questionnaire for athletic trainers was qualitative. The second part of the questionnaire was quantitative using the 5-point Likert-type scale with answers ranging from "strongly disagree" to "strongly agree" for the athletes. Both athletes and athletic trainers had their own sections.

The participants for this study were professional athletes, undergraduate or graduate student-athlete who were attending Great Midwest Athletic Conference (GMAC) institutions. The researcher used the SPSS program to analyze the data. The athletic trainers who participated in the survey also came from GMAC institutions. This survey covered all gender and race among student-athlete regardless of class or status. Same approach was applied to athletic trainers who participated in the Great Midwest Athletic Conference. The type of sample that was used for this survey was purposive sampling. Data was analyzed using Pearson Correlation Analysis to see if there is relationship between a player's health with a player's time spent rehabilitating with an athletic trainer, versus a player's health throughout the season of a player who does not seek out treatment as sought by the study.

STUDY FINDINGS

Difference between an athletic trainer and a personal trainer.

What differentiates the two is that athletic training uses medical model for professional education that includes didactic and clinical education (NATA, July 14, 2017). Athletic trainers in the United States work under a physician as prescribed by each State's licensure or legislation. Personal trainers evaluate someone's fitness level and then come up with a workout plan for that person. To be an athletic trainer in the United States, one is required to have a bachelor's degree along with a master's degree in the relevant fields. Like many other professions, Athletic profession in the United States requires undertaking studies in the relevant field. There are several factors why someone goes to pursue athletic training studies. One of the reasons could be personal motivation (Mulder et al, 2018). What this implies is that someone would go into the field of athletic training due to specific motivators for the program. These could include; perceived challenges, and some other supportive factors (Mulder et al., 2018). According to Mulder, the reasons could be both intrinsic and extrinsic motivations as to why one decides to pursue such studies as sports medicine or physical education. Other factors that influence people to go into athletic training could have a correlation with how one reacts to different situations while in the workplace. Such situations may include "Past experiences, mentorship, and professional development which serve as motivators for the pursuit of an academic degree (Mazerolle Singe et al., 2019). According to a study carried out by Weiss & Neibert, students who graduate with a minor degree in athletic field were reported to have lower commitment to athletic training than students who majored in athletic field like sports medicine or physical education (Weiss & Neibert, 2014). According to Dearie, the factors that rank as very important in influencing a student's choice of specialization in athletic training are influenced by the quality and marketability of the athletic training program and athletic program faculty competence and commitment (Dearie et al., 2020). Other factors include; the program's accreditation status, program's Board of Certification (BOC) pass rate, and the types of available clinical sites (Dearie et al., 2020). There is a correlation between the intrinsic motivating factors of the students who go into athletic training and the extrinsic factors related to the categories of an athletic training program and athletic training program's faculty (Dearie et al., 2020).

Athletic Trainers play a vital role in athletes' recovery and their time to return back to the field to play. Not only do they play an important role in the recovery process from their professional work and the treatment they give the athlete, but they also play a motivational role for the athlete. From the responses given by athletes, it was shown that the performance environment was directly related to intrinsic motivation by 25% (Brinkman-Majewski & Weiss,

2018). Perceptions of performance environment were positively related to interest, enjoyment and perceived competence and negatively related to tension and pressure (Brinkman-Majewski & Weiss, 2018). According to Brinkman, Majewski and Weiss, both male athletes and female athletic trainers had a higher understanding of motivational environment as related to Athlete's success than male athletes and athletic trainers (Brinkman et al, 2018). However, males have an advantage when it comes to intrasquad rivalry in rehabilitation (Brinkman, Majewski & Weiss, 2018). Males tend to do better in competition while females do not necessarily need competition to be motivated in rehabilitation settings. According to Granquist, over 98% of athletic trainers believed that an athlete's non ability to adhere to sport-injury rehabilitation is the cause for poor rehabilitation (Granquist, 2014). The athletes must adhere to the rehab to return to sport, adherence has a tremendous effect on their outcome. It is hard for an athlete to successfully rehabilitate when he/she did not adhere to the protocol, lack of adherence is a major obstacle to ensure progression of rehab protocols (Granquist et al., 2014). There is also a responsibility on the athletic trainer to build a relationship with the athlete as most of the problems arise from lack of one-on-one attention. If the athletes have personal attention, the adherence increases (Granquist et al., 2014). It is also the athletic trainer's responsibility to be a coach for their athlete and hold them accountable such that if the athlete is continuously late or missing appointments or treatment then an acceptable reason culture (Lacy et al., 2020). There are several other demands for an athletic trainer. Some might include "role strain, staffing concerns, and work- life conflict (Goodman et al., 2017). Role strain includes the goals of the athletic trainer not aligning with the goals of the athletic department. Staffing includes not having the right staff for the number of people needed for productivity. The work-life conflict includes handling the chaos of a full season and off season and having little time for family. Burnout is also common for athletic trainers. It is described as "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform" (Weight et al., 2021).

Impact on Performance

Athletic trainers play a key role in collegiate athletics strength and conditioning programs, especially when it comes to injury prevention exercises. One of the most common types of injuries in football and Track and Field is a hamstring strain or pull. According to Sadri Aghdam et al., 2020, between 8%-25 % of injuries are related to the hamstring, as it is even greater in Track and Field as 26% of injuries that take place are related to the hamstring. Athletic trainers can reduce the risks of injuries like this by incorporating better rehab exercises as well as working with the strength and conditioning coach to include workouts that reduce the risks of hamstring injuries. Technology is becoming a growing trend in athletics, as athletes have recently been wearing technological devices on their bodies that track things such as heart rate, calories burned, or speed. Athletic wearable technology companies and the smart clothing market segment is expected to reach 4\$ billion by 2024 (Luczak et al., 2019). This technology can further help an athlete's performance by tracking their speed, change of direction, or activity produced such as heart rate (Luczak et al., 2019). Athletic trainers along with strength and conditioning coaches have used this technology to their advantage to access their athletes while working out and making the necessary adjustments to improve their performance. Athletic trainers access a lot of data on their job to better protect their athletes such as using weight charts to determine hydration levels. Tracking hydration is extremely vital for maintaining performance and preventing heat illness (Eith et al., 2020). Hypohydration of as little as 2% can result in performance decrements and 3% hypohydration can cause cardiovascular impairments and thermoregulation disturbances (Eith et al., 2020). According to Eith et al., 2020, Hydration assessment can be used by athletic trainers (ATs) to determine if an intervention strategy is warranted and, if so, to guide rehydration recommendations. Eith's study showed that more than half of ATs were not using weight charts to identify athletes' changes in hydration status (Eith et al., 2020).

Motivation of Athletic Trainers and their working environment

It is not discussed often how the environment of the workplace can affect Athletic Trainers and their attitudes and motivations. In this and other studies, there was consistency among athletic trainers who felt a lack of control or even powerless when it came to implementing conversation in their work setting (Potteiger et al., 2017). According to Potteiger et al., 2017, some athletic trainers expressed a lack of control when it came to implementing new practices. For athletic trainers, the collegiate setting can offer a wide variety of demands, such as long roadtrips, extended nights away from home, pressure to win, supervision of athletic training students, infrequent days off, high athlete- to- Athletic Trainers ratios, athletes on scholarship, and extended competitive seasons (Eason et al., 2015). All of these factors can make it difficult for athletic trainers to keep their motivation throughout the season while doing their job effectively as well. It is clear that most athletic trainers at the collegiate level take pride in professional commitment "not only to advancing the profession but also to fulfilling their job responsibilities (Eason et al., 2015). According to Eason et al, professional commitment means adhering to all the duties described in the job description. Making sure

to cover practices, conditioning, [and]lifting sessions. Traveling with assigned teams. Acting as a liaison between parents, athletes, coaching staff, and physicians. Creating rehab programs for injured athletes, including preventative programs (Eason et al., 2015) It was also found that not only professional commitment that matters in performance of athletes, but professional responsibility and delivering the best care for their athletes was a cornerstone for the Athletic Trainers (Eason et al., 2015). This study also found a commitment and dedication to student-athletes to be crucial as well. The results of the study showed that Collegiate athletic trainers were internally motivated and professionally committed to their role in the health care profession regardless of their National College Athletics Association (NCAA) division is provided.

Demands of an Athletic Trainer

Being an athletic trainer can be draining for some like the long hours and time commitment needed. According to Mazerolle females usually have a harder time balancing their careers with personal life (Mazerolle, 2018). The long hours are not the only struggles that athletic trainers deal with as there is also the problem of lack of Compensation. Adequate compensation has been a longstanding concern in athletic training and a known attrition factor (Mazerolle et al., 2018). Burnout has also been heavily related to athletic training as it has been reported by graduate assistants, program directors, and those who work in the college and secondary school settings (Mazerolle et al., 2018). It is not just the athletic trainer that is affected by their job, an athletic trainer's spouse can very well feel the effects and demands of their partner's work (Singe & Mensch, 2021). Athletic trainers working in the intercollegiate setting have acknowledged that, for a work-life balance to occur, they must have support at home from their families and their spouses (Singe & Mensch, 2021). For athletic trainers in-session, it is even harder to create a Work-Life Balance.

One of the best ways to deal with this is adaptation and acceptance by the athletic trainers and their spouses to the climate around their job which can allow for reduced stress and improved work-life balance (Singe & Mensch, 2021). Time management also plays a key role in finding a Work-Life-Balance. The need for day-to-day as well as long-term planning is necessary to find Work-Life-Balance (Singe & Mensch, 2021). In addition to the demands of athletic trainer's job, which sometimes result to work-place stress, there could also be clinical decision-making conflicts within the coaching staff. The effect of the head coach also affects the head athletic trainer especially in higher divisions such as Division I, followed by Division II and III (Lacy et al., 2020). Some are just after pleasing their coaches (Lacy et al., 2020). Division I athletic trainers' coaches have greater influence on their performance as well as their job security (Lacy et al., 2020). There is no difference across divisions when it comes to pressure from the coaches to allow the athletes to return back to play before they are fully rehabilitated (Lacy et al., 2020).

However, athletic trainers seem to expect it as part of the athletic culture. There is much information on retention factors for a head Athletic Trainer at the Division I level. It was found that the primary reasons for head athletic trainers leaving their jobs were autonomy, social support, enjoyment of job, fitting the NCAA Division 1 football club and kinship/responsibility (Mazerolle et al., 2013). It was found that work satisfaction had to do with the relationship that the head Athletic Trainer had with their coworkers as well as student-athletes. One Head-Athelete with 17 years of experience in his current position stated "working with the student-athletes is rewarding", that aspect would probably be what athletic trainers enjoy the most. Secondly, it could probably be the staff they work with since they spend a lot of time together and have created a family atmosphere (Mazerolle et al., 2013). It was also found one compelling reason for staying in the athletic training profession was professional development as it added motivation for them to stay committed. According to Mazerolle et al, Athletic training education program directors have cited student growth/ development and interactions with students as most rewarding and beneficial (Mazerolle et al., 2013).

Student-Athletes view of Athletic Trainers

Sport-related injuries can have lasting effects on student-athletes as it can lead to depression, academic struggles, and risk of reinjury (Budziszewski et al., 2020). When exploring the predictors in moral disengagement among collegiate athletic trainers, it was found that the Athletic Trainers who view sports as a "work-like orientation" were more likely to morally disengage and put the athletes in harm's way by allowing them to return to play when the athletes should still be sidelined (Budziszewski et al., 2020). On the other hand, those athletic trainers who were higher in commitment and identified more strongly with their teams reported lower levels of moral disengagement (Budziszewski et al., 2020). This means that athletic trainers' personal characteristics in ethical attitudes directed towards injury have a relation to their moral engagement or disengagement when it comes to allowing the athlete to return to play while injured. When student-athletes were asked their views on the Patient-centered care given by their collegiate athletic trainers, they defined patient-centered care as individualized and prioritized health care given by the athletic trainer (Redinger et al., 2020). It was found that majority of the time, the student-athletes received a good level of patient-centered care (PCC). The athletic trainers providing the care kept the best interest for their athletes and practiced

patient-centered care during the interactions with the athletes (Redinger et al., 2020). However, some areas were lacking from the Athletic Trainers such as emotional support. This support includes identifying the concerns patients have about the effect their clinical status may have on their physical wellbeing, finances, and the burden on others (Redinger et al., 2020). Another area that was lacking was when it came to athletes returning to play. The Athletic Trainers struggled with their influence on the coach when the decision was made whether or not an athlete was ready to return to play (Redinger et al., 2020).

Advancement of Athletic Trainers

Athletic Trainer education has evolved in many ways over the last couple of decades. The required degree to become an athletic trainer in the United States of America is now a master's degree. Previously, an Athletic Trainer only needed a bachelor's degree. Not only has there been an advancement of education for Athletic Trainers, but there have also been strides in the actual field of study made by athletic trainers. Athletic Trainers have made substantial contributions to sports medicine research in recent decades. Particular areas of advancement have been in the areas of health disparities, sport-related concussion, exertional heat-illness, and musculoskeletal injury prevention and management, therapeutic interventions, and behavioral health (Diakogeorgiou et al., 2021).

CONCLUSION

At the Division I level, it is much easier for the athletic trainer to adhere to the needs of the student-athlete as they have more resources. At the lower levels of collegiate athletics, there is more stress on athletic trainers as they typically deal with more athletes for each sport, have less help, and the compensation is not always the best. For someone to be an athletic trainer they must enjoy what they do, or they will burn out fast. For the student-athlete, it is important to adhere to the rehab schedule such as going to each scheduled treatment and doing more physical exercises to maintain their body and stay healthy. At the Division I level, it is easier for these student-athletes as they have all the resources available as it's the highest division and much preferred in resource allocation. At lower levels, it is more of the athlete's responsibility to take care of themselves as well as work with their athletic trainers. The better the relationship is between the student-athlete and athletic trainer, the better off all parties involved are. Injuries will inevitably occur during a season regardless of the sport but working with athletic trainers will help limit the number of injuries that happen and it will also help injured athletes get back to play sooner.

RECOMMENDATIONS

There is need to have a better understanding of the relationship between Athletic Trainers and athletic performance, the study should include a correlation chart that shows student athlete's time spent in treatment compared to how much or little time they miss their sport because of injury. This will also give a better idea whether there is need to put more emphasis on student-athletes to attend treatment sessions.

REFERENCES

- Brinkman-Majewski, R. E., & Weiss, W. M. (2018). The motivational climate and intrinsic motivation in the rehabilitation setting. *Journal of Sport Rehabilitation, 27*(5), 460–468. <https://doi.org/10.1123/jsr.2016-0228>.
- Budziszewski, R., Graupensperger, S. A., & Vierimaa, M. (2020). Exploring predictors of moral disengagement in collegiate athletic trainers. *Journal of Athletic Training, 55*(1), 96–104. <https://doi.org/10.4085/1062-6050-504-18>.
- C. A., Detwiler, K., Rock, J., Cooper, L., & Simone, E. (2018). National Athletic Trainers' Association position statement: Facilitating work-life balance in athletic training practice settings. *Journal of Athletic Training, 53*(8), 796–811. <https://doi.org/10.4085/1062-6050-51.11.02>.
- Dearie, A., Van Langen, D., Cavallario, J. M., & Comins, S. A. (2020). Factors influencing a student's choice of a Graduate Professional Athletic Training Program. *Athletic Training Education Journal, 15*(3), 177–185. <https://doi.org/10.4085/150119115>.
- Eberman, L. E. (2018). Motivators, anticipated challenges, and supportive factors for athletic trainers pursuing the doctor of athletic training degree. *Athletic Training Education Journal, 13*(2), 148–157. <https://doi.org/10.4085/1302148>
- Granquist, M. D., Podlog, L., Engel, J. R., & Newland, A. (2014). Certified Athletic Trainers' perspectives on rehabilitation adherence in collegiate athletic training settings. *Journal of Sport Rehabilitation, 23*(2), 123–133. <https://doi.org/10.1123/jsr.2013-0009>.
- Lacy, A. M., Bowman, T. G., & Singe, S. M. (2020). Challenges faced by collegiate athletic trainers, part I: Organizational conflict and clinical decision making. *Journal of Athletic Training, 55*(3), 303–311. <https://doi.org/10.4085/1062-6050-84-19>.
- Mazerolle Singe, S., Pike, A. M., Coleman, K. A., Myers, S. L., Barrett, J., Belval, L. N., Rush, J. L., & Katch, R. K. (2019). Doctoral education in athletic training: Pursuit of the degree and its influence on career aspirations.

Athletic Training Education Journal, 14(2),99–107. <https://doi.org/10.4085/140299>.

Mazerolle, S. M., Pitney, W. A., Goodman, A., Eason, C. M., Spak, S., Scriber, K. C., Voll, Singe, S. M., & Mensch, J. (2021). Work–life balance in athletic training: A perspective of the athletic trainer’s spouse.

International Journal of Athletic Therapy and Training, 26(4),216–224. <https://doi.org/10.1123/ijatt.2019-0089>.

Mulder, E. R., Bacon, C. E., Edler, J. R., Hankemeier, D. A., Games, K. E., Van Lunen, B. L., & Sadri Aghdam, N., Rezaei, M., Azghani, M. R., Ghaderi, F., & Adigozali, H. (2020). The relationship between Nordic hamstring test and Isokinetic Dynamometry in football and track and field student athletes: A cross-sectional study. *Muscle Ligaments and Tendons Journal*, 10(04), 759. <https://doi.org/10.32098/mltj.04.2020.24>.

Singe, S. M., & Mensch, J. (2021). Work–life balance in athletic training: A perspective of the athletic trainer’s spouse. *International Journal of Athletic Therapy and Training*, 26(4),216–224. <https://doi.org/10.1123/ijatt.2019-0089>.

Weiss, W. M., & Neibert, P. J. (2014). Changes over time in the predictors of Athletic Training Program Commitment.

Athletic Training Education Journal, 9(2), 64–71. <https://doi.org/10.4085/090264>.

Websites

Diakogeorgiou E, Ray Jr. RR, Brown S, Hertel J, Casa DJ. The Evolution of the Athletic Training Profession. *Kinesiology Review*. 2021;10(3):308-318. Accessed November 1, 2021.

Athletic trainer demographics and Statistics [2021]: *Number of athletic trainers in The US*. Athletic Trainer Demographics and Statistics [2021]: Number Of Athletic Trainers In The US. (2021, April 30). <https://www.zippia.com/athletic-trainer-jobs/demographics/>.

Athletic trainer. ExploreHealthCareers.org. (2017, July 14). Retrieved September 10, 2021, from <https://explorehealthcareers.org/career/sports-medicine/athletic-trainer/>.

Edge, A. (n.d.). *Athletic trainer vs. personal trainer...what's the difference?* Athletic Training Room Equipment, Taping Stations, Tables, Lockers. Retrieved September 10, 2021, from <https://www.teamedgeathletics.com/blog/athletic-trainers-vs-personal-trainer-whats-the-difference>. 10–13. <https://doi.org/10.1123/ijatt.18.4.10>.

Redinger, A. S., Winkelmann, Z. K., & Eberman, L. E. (2020). Collegiate student-athletes' perceptions of patient-centered care delivered by Athletic Trainers. *Journal of Athletic Training*, 56(5), 499–507. <https://doi.org/10.4085/130-20>.

Goodman, A., Mazerolle, S. M., & Eason, C. M. (2017). Organizational infrastructure in the collegiate athletic training setting, part II: Benefits of and barriers in the Athletics model. *Journal of Athletic Training*, 52(1), 23–34. <https://doi.org/10.4085/1062-6050-51.12.24>.

Weight, E. A., Taylor, E., Huml, M. R., & Dixon, M. A. (2021). Working in the sport industry: A classification of human capital archetypes. *Journal of Sport Management*, 35(4),364–378. <https://doi.org/10.1123/jsm.2020-0070>.