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UNDERSTANDING TRAUMA AWARENESS AND COMMUNICATION COMPETENCY
IN ATHLETIC TRAINING: A MIXED METHODS INQUIRY

By

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presented in partial fulfillment of requirements for the degree of

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Understanding trauma awareness and communication competency in athletic training: a mixed methods inquiry

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There has long been a link between stress and injury in athletes. Even so, athletic injuries are often viewed as primarily performance issues which ignores potential underlying psychological contributors to the injury. Research has shown that while athletic trainers have some training in psychological competencies, they lack awareness of trauma and self-efficacy in engaging in difficult conversations with athletes. Review of the literature will address the gaps in athletic training, and the potential of athletic trainers in supporting physical and mental health outcomes in athletes (Cormier & Zizzi, 2015; Cutler & Dwyer, 2020). Addressing the whole person within a sample of Athletic Training Educational Program students (ATEPs) could reduce injury and improve performance. To consider holistic healing for athletic injury, it is important to incorporate considerations of childhood trauma on athletes’ current well-being. The current study explored the influence of a whole person athletic training workshop on ATEPs’ trauma awareness and communication competency using a mixed methods sequential explanatory design. The integrated results of this mixed methods research indicated a statistically significant increase between pre and posttest measures of ATEPs’ trauma awareness. There was no significant difference observed from pretest to posttest on measures of communication competency. Qualitative results assisted in further explaining how the workshop influenced the quantitative results and other factors that contributed to participants’ awareness of trauma and communication competency. Major themes emerged that will be discussed in further detail along with implications of the study, limitations, and directions for future research.
Dedication

To Kim.

Who sees me, catches me, accepts me. Every. Single. Time.
Acknowledgements

This completed work could not have been possible without the unwavering support and work of my chair, Veronica Johnson. There have been countless hours of editing, reading, mulling over data, speaking about results, and contemplating what it all means. My gratitude for the care and valuable time that Roni has spent by my side is nearly unapproachable with words. Many days each of us remarked that we feel like we spent the whole week with one another even though we may only have seen each other once. Emails upon emails always returned with attentiveness and answers, or different ways to think about pieces that needed shifting. I cannot say enough about how inspired I am simply by being in Roni’s presence. The times I walk into her office or send her a panicked email, and in her grounded voice she says, ‘It is going to be okay’ and I come down from my panic. I am forever honored by the relationship we have built on a foundation of safety and witness. I daresay along the way, Roni got to know me, and never spared an opportunity to tell me, ‘You are doing this, it is happening.’ The words that I desperately needed flowed out of her mouth just when I needed them most. And her aptitude for formatting documents which is not part of my skills set is one she smoothly took over and I will forever be grateful that the Table of Contents matches the document! I thank you. When I requested her to be my chair, she said with slight hesitation that she wanted to think about it. I sat on the edge of my seat, fearing it would be too much for her already very full workload, then she graciously accepted. And, to my delight and challenge, we decide to embark on the journey of mixed methods! There was an unbelievable amount of shared learning here, and she was with me, every step of the way. I thank you. Special thanks to her partner, Eric as well who must have bored to tears of hearing ‘I am in a meeting with Adrienne.’ Thank you for your patience in all the time I took the time of your person.
I must take the time here to acknowledge the love and support I have received from Allison and Sabina. I could not have made it without them through this journey. Between the ongoing messages back and forth and solidarity in statistics and research last year when I was bumbling through 4 classes and comps, they held me when I thought I was falling. They were there every single time to give me the utmost joy and smiles and hugs when I needed them most. This year, not having them in classes has left a small hole in my process, and, yet, the messages remained consistent. We maintained a monthly get together, and never in my life have I laughed so consistently with their smiles, their understanding, and their sheer wit which is like no other. I never felt anything but accepted and supported in their presence. Those two women were going to hold me up when I thought I might crumble.

My Missoulians! Notably, Jess and Andrea, my rocks on the outside. Quite literally. The number of miles that I have run with Jess is simply beyond counting at this point. And, right along with those miles she has listened with such openness, inquiry, and support. At this point she probably knows as much about my research as I do. And she continues to be by my side. Contributing wholeheartedly to my attempts to maintain my own mental stability by moving our bodies outside. In between classes, clients, all the things. I am forever grateful for her being by my side through all of it. Thank you. While Jess appears never to tire of hearing about my work, I am guessing we both will be glad to slog some miles talking about ANYTHING else.

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smiles and acceptance for who I am whole heartedly. Andrea is famous for the push to get me out of town and celebrate the small wins, the end of the semester, a presentation, passing in a final paper or project, whenever we can which has been such a solace these past few years. Thank you.

I must also mention the friends I have from near and far. Katherine, my forever friend whom I have had the pleasure of knowing for 15 years at this point. I don’t know what words to put together that would describe the connection we have. She is the person who knows what I’m going through when I utter the first word in a phone conversation. While we shared years of living in the same place, we have shared nearly as many not-and yet, she always makes the time and space for phone calls. She is the first to congratulate me on things that seem trivial or just in passing as part of this process. She takes the time to recognize me. Always. She and I have traveled miles upon miles since I have been in Montana to find a place to connect in the ‘middle’ and weekends melt away when I’m in her presence. She is in constant support of my physical feats and whether we meet for a weekend that I spend most of running, she is there cooking dinner and smiling when I walk in the door. And, if I need to open my computer, she is first to say, ‘great I’ll do some work too.’ She opens her home when I randomly go back to Oregon because I just MUST see the ocean, she says, ‘great, I’ll come too.’ And, she never lets me forget my accomplishments.

I will mention Emily here too. The amazing running woman that I crossed paths with forever ago working in wilderness therapy. We met trudging through the blizzarding night to exchange a client. That woman, I thought, I must get to know. And, time went on and we discovered a shared love for running. Who knew. A bond was formed. So many shared miles, shared races, shared running trips with Emily. Her loyalty to our friendship goes beyond the
words on this page. Despite her own studies and busy family life, she never misses a phone call. She is one I can say, nearly always answers her phone. She was the first person I called when I left my interview for the doc program. She was who I called when I accepted the position. This woman has validated my experience over and over. We have always made it a priority to visit each other no matter where we were living (I was constantly moving in my late 20’s and 30’s.) She is real with me in a way that makes me feel loved, seen, accepted and held. Thank you.

I want to acknowledge a longtime friend, Rachelle. An amazing woman by all definitions. Never far from my side despite the miles between us. Whether it’s squeezing in a river trip during breaks from school or pouring over our calendars until we find a meeting time and place between WA and MT, she always supports my process. One of the most accepting and brave women I know, she emanates joy, authenticity, and affection. It’s contagious to be in her presence and the time we have managed to carve out during my time in the program has me beyond gratitude. While it seems there is never enough of that time, with Rachelle, sitting on a river raft contemplating life, time seems to stop. Thank you for always reminding me with words or actions that being present is necessary and integral. Thank you.

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she continues to check in, ask me about my process. She is one of the most authentically warm people I know. Thank you for always being in my life.

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encouragement kept me here, kept me inspired, and reignited my love for learning, truly. I am so honored and grateful for their help and guidance through all the steps. I’m still not sure how I got so lucky.

Clearly many people, and some that are not mentioned, have helped me on this journey. The journey that turned me inside out and upside down. Today I stand upright and bow in gratitude to all who helped me get here.
# TABLE OF CONTENTS

CHAPTER 1: Introduction ............................................................................................................. 1

Background of the Problem ......................................................................................................... 1

- Adverse Childhood Experiences (ACEs) ................................................................................. 2
- Stigma of Mental Health in Athletic Culture ........................................................................... 7
- Problem Statement .................................................................................................................. 8
- Purpose of the Study ............................................................................................................... 8
- Research Questions: ................................................................................................................. 10
  - Hypotheses ............................................................................................................................ 10
    - Hypothesis 1 .................................................................................................................... 10
    - Hypothesis 2 .................................................................................................................... 10
- Definition of Terms ................................................................................................................. 11
- Delimitations ............................................................................................................................ 13
- Validity within Mixed Methods Research .............................................................................. 14
- Significance of the Study ......................................................................................................... 17
- Summary ................................................................................................................................. 18

CHAPTER 2: Review of the Literature ......................................................................................... 19

- The Physical Impacts of Trauma in Athletes ........................................................................... 19
  - Assessing Stress Response and Injury .................................................................................. 21
- Stigma of Mental Health in Athletic Culture ........................................................................... 29
- Athletic Trainer History and Competencies .......................................................................... 31
- Barriers to AT Self-Efficacy .................................................................................................... 36
- Summary ................................................................................................................................. 39

CHAPTER 3: Methodology ............................................................................................................ 41

- Rationale for use of mixed methods ....................................................................................... 41
- Theoretical Contributions/Philosophical Underpinnings of Mixed Methods Research .. 42
- Role of the Researcher ............................................................................................................ 45
- Phase 1: Quantitative: Non-Experimental Pre-Post Test Design ......................................... 46
References.................................................................................................................................................. 104

APPENDIX A: Information and Consent Form.......................................................................................... 113

APPENDIX B: Demographic Questionnaire ............................................................................................ 115

APPENDIX C: Adverse Childhood Experience (ACE) Questionnaire .................................................... 118

APPENDIX D: Perceived Stress Scale-10 (PSS-10).................................................................................. 120

APPENDIX E: Trauma System Readiness Tool......................................................................................... 121

APPENDIX F: Communicative Competence Scale................................................................................... 122

APPENDIX G: Workshop Schedule.......................................................................................................... 124
CHAPTER 1: Introduction

Athletes are often exalted for their performance and physical ability. While their physical abilities are honored, their whole person is overlooked. The term whole person comes from the idea of wholistic healing which includes the entirety of a person’s mental, emotional, physical, social, and spiritual dimensions. Viewing the whole person means bringing each of these parts of someone into greater harmony and looking beyond just the physical (Otto, 1979). This becomes particularly salient when an athlete is injured.

Research has shown that there is a mind-body connection in human beings which becomes important when conceptualizing athletic injury (Badenoch, 2018; Mate, 2019; Van der Kolk, 2014; Williams & Andersen, 1998). Viewing athletic injury through a primarily physical ability and performance lens ignores the mind-body approach to recovery. In considering holistic healing for athletic injury, it is important to incorporate the potential influence of trauma, including childhood trauma, on athletes’ current well-being.

The onus of healing for injured athletes often falls on the shoulders of athletic trainers (ATs). ATs may be presented with the unique opportunity to recognize and understand how childhood trauma can contribute to injury in athletes. The ability to recognize the presence of childhood trauma, broach the topic with their athletes, and engage in meaningful conversation and psychoeducation about the link between trauma and performance could expedite athletes healing from injury, and even prevent recurring injury.

Background of the Problem

Traumatic experiences impact how we manage stress, creating an overactive stress response in the nervous system that leads to the body reacting physiologically, behaviorally, and
emotionally (Badenoch, 2018; Carver & Connor-Smith, 2010; Mate, 2019; Van der Kolk, 2014; Williams & Andersen, 1998). There is a clearly established connection between childhood traumatic experiences and psychological and emotional health, however, there is limited research that focuses on the physical implications of these events (Badenoch, 2018; Mate, 2018; Van der Kolk, 2014). Given the focus on physical aptitude and performance, athletes provide a unique opportunity to investigate the connection between historically distressing events and physical injury. An important competency when working with athletes struggling with mental health issues as a result of injury are well documented. Understanding athletes’ psychosocial histories can help us better understand overactive stress responses that may contribute to physical injury (Cormier & Zizzi, 2015; Moore, 2017, Neal et al., 2013).

In emphasizing the importance of past life events, the overwhelming statistics on trauma speak for themselves. The US Department of Health and Human Services report in their National Child Traumatic Stress Initiative of 2019, that by the age of 16 at least two thirds of children have reported at least one traumatic experience. This is a startling statistic when we consider how the experience of a traumatic event can contribute to social, mental, and physical distress long after the event (Badenoch, 2018; Van der Kolk, 2014). Historically, literature focused on stress and injury is well documented, yet sports practitioners continue to treat physical injury as primarily a performance concern (Arvinen-Barro & Clement, 2016). To better address mental health and overall well-being in athletes it is imperative to shift the focus. One way to approach a shift in AT is to increase knowledge about how childhood traumatic experiences can impact the way we manage stress and subsequent physical manifestations.

**Adverse Childhood Experiences (ACEs)**
A team of researchers led by Felitti et al. (1998) began to notice a valuable correlation between traumatic experiences in children and physical illness and injuries in adults. Their creation of the Adverse Childhood Experiences questionnaire helps us to now frame historical trauma as ACEs (adverse childhood experiences). The questionnaire is comprised of seven categories including three categories labeled as abuse and four categories labeled as household dysfunction. The abuse categories included psychological, physical, or sexual abuse. The household dysfunction categories included substance use, mental illness, violence against mother or stepmother, and criminal behavior (Larkin et al., 1998). The CDC now defines ACEs as all types of abuse, neglect, and other potentially traumatic experiences under the age of 18 (Houry, 2019; Larki et al., 1998). Examples may include physical and emotional abuse or neglect, witnessing violence, serious mental illness, or substance abuse in the home (Houry, 2019).

Feliti et al.’s research determined that children who are exposed to emotional, physical, or sexual abuse are at greater risk of negative consequences later in life that may include and not be limited to poor mental health, chronic diseases, functional limitations, lower SES, lower self-esteem, and increased social isolation (Elliott et al., 2005; Felitti et al., 1998). According to Monnat and Chandler, “childhood is a particularly salient stage of development, and thus, adverse events during childhood have the potential to influence developmental pathways and shape the character and content of later life” (2015, p. 725). One could conclude that the impacts of childhood trauma may emerge as individuals’ number of stressors increase, for example, during transitional stages in young adulthood. As applied to athletes, often their experiences in college shape their future athletic success.

Research suggests that student athletes are already under increased stress due to rigorous academic as well as athletic demands (Cutler & Dwyer, 2020). Considering the prevalence of
nearly 90% of the general population having experienced something traumatic in their lives, it is not a far reach to consider how adverse traumatic experiences may impact athletes (Kair et al., 2015). Unfortunately, there is limited research to address the prevalence of childhood trauma specifically within the athlete population. In the general population, ACE research has determined that more than half of all individuals experience an adverse childhood experience before the age of 18, therefore we can logically conclude that athletes are among the many that experience ACEs (CDC, 2013; Kair, Cromer, Davis, & Strunk, 2015).

The only specific study that examined traumatic experiences in athletes is one that explored the prevalence of ACE scores in elite athletes from 16 NCAA Division I campus teams in Eastern Oklahoma (Kair, et al., 2015). Considering the regional limitations, their results revealed that 30.8% of the athletes indicated they had experienced at least one ACE. While this number is lower than the average in the general population, it is important to consider protective factors which were not studied and may impact the results of the study. Among the athletes who reported multiples ACEs, there was also evidence of increased risky behaviors and somatic complaints. One possible explanation for the findings is that following the experience of an ACE, athletes themselves are at increased risk for physical injury. Clearly there is a need for further inquiry into the role ACEs might play in the experience of athletes. While the use of the ACEs score seems to be an appropriate determinant of potential consequences throughout the life span, an important limitation to consider is the inability of the ACEs questionnaire to assess the frequency, intensity, or timing of the trauma exposure (Anda, Porter, & Brown, 2020).

Lazarus and Folkman (1984) used their stress and coping framework to illuminate the importance of the concept of cognitive appraisal when using the term ACEs to describe traumatic childhood experiences. They address the importance of the person’s perception of an event and
the difficulty in discerning what is deemed dangerous or threatening which influences a person’s coping response. When the body is repeatedly asked to adapt to numerous stressful events the stress mediators become chronically elevated, therefore increasing the likelihood of excessive physiological and behavioral reactions (Garland et al., 2011; McEwen & Seaman, 2009). In addition, when there is an internal assumption towards events being perceived as stressful, there is heightened stress reactivity which changes a person’s ability to appropriately assess situations. These events may appear dangerous and in fact trigger a mind and body reaction that is out of proportion with the actual stressor (Lazarus & Folkman, 1984). It makes sense that for athletes, increased stress responses in the body could contribute to and exacerbate physical injury.

Athletes are included in the overall population of people with increased ACE scores that potentially contribute to and increase physical illness and injuries. Furthermore, they are revered as being able to perform; to push through adversity to win, however, they, too, are navigating mental health distress, just like the rest of us (Sacco, 2021).

Athletes are placed under increased stress and pressure by the nature of performance which likely accounts for up to 33% of athletes struggling with mental health concerns (Cutler & Dwyer, 2020; U.S. Department of Health and Human Services, 2022). Their mental health distress may be exacerbated due to previous life events impacting their internal stress response (Cutler & Dwyer, 2020). Dating back to the 1960s there has been a focus on stress and injury in athletes, however, despite the growing knowledge of this connection, there is little information about childhood traumatic events and how to address them directly with athletes (Holmes & Rahe, 1967).

The NCAA has tried to address the concept of the whole person athlete specifically through the creation of a multidisciplinary task force to address mental health issues with student
athletes. Their task force contributed to the book, *Mind, Body, & Spirit: Understanding and Supporting Student-Athlete Mental Wellness*. It offers health and safety programs, best practices for supporting student athletes, and promoting mental health care. Within the book, the NCAA asserts that the sport environment is an important place for destigmatizing mental health and normalizing mental health care seeking behavior (NCAA Sport & Science Institute, 2020). Unfortunately, their efforts have fallen short, and athletes continue to struggle with help-seeking behaviors illuminating the larger systemic issue surrounding mental health in sport culture (Cutler & Dwyer, 2020; Stamatis et al, 2020; Stiller-Ostrowsky & Ostrowsky, 2009).

The focus in athletic training continues to be on student athletes’ emotional response to injury with a forward focus on how to return quickly to sport performance rather than addressing the psychosocial history that may be contributing to the injury (Arvinen-Barrow & Clement, 2016; Carver & Connor-Smith; De Groot et al., 2018; Williams & Andersen, 1998). The implications of ignoring athletes’ psychosocial history can contribute to difficulty rehabilitating from injury, missed opportunities for treatable mental health distress, reinforcement of ‘be tough’ attitudes, and subsequent stigma of mental health seeking in sport culture (Giles et al., 2020; Gucciardi et al., 2015; Schwenk, 2000).

Ultimately, if we continue to neglect athletes’ entire person when they are struggling within their sport, we are at risk of repeating events including the tragic death by suicide of five elite athletes in a two-month span in 2021 (Siefert, 2022). There is an opportunity to intervene. These risks clearly point to the importance of shifting the lens to a mind-body approach for recovery that incorporates the impact of childhood trauma on athletes’ current well-being. By shifting the lens, we could illuminate the benefits of treating the entire person. Treatment of the entire athlete could increase their mental wellbeing which could then enhance their performance.
over the long-term with reduced risk of career-ending issues, improvement of healthy coping skills for life’s stressors and increased meaningfulness found in their sport (Henriksen et al., 2018).

Stigma of Mental Health in Athletic Culture

While there is a historical awareness of stress response, negative life events, and mental health concerns in athletes, a larger underlying concern is the stigma surrounding mental health issues in the sport culture. The stigma creates a clear barrier in adopting a holistic approach with athletes. There is evidence of stigma in sport specific to mental health concerns, as research suggests that athletes are more inclined to reach out for care when experiencing physical ailments than for mental health issues (Schwenk, 2000). In many cases, athletes’ concerns continue to be viewed as a training or performance issue regardless of the nature of the concern. According to Schwenk (2000), at times athletes express concerns that, if presented in other contexts, might warrant a referral for counseling such as sleep disruption or lack of enjoyment in sport, however, presenting problems are not often viewed as mental health concerns. This suggests an ongoing dilemma of underdiagnosing mental health concerns and inadequate treatment for athletes. Additionally, underdiagnosing mental health concerns may reinforce athletes’ feelings of weakness, fear of asking for help, and their need to focus on their performance rather than psychological stressors.

Multiple research studies have established that ATs feel their educational experience lacked comprehensive mental health training (Clement & Arvinen-Barrow, 2018; Neal et al., 2013; Stiller-Ostrowsky & Ostrowsky, 2009; Shwenk, 2000). In addition, it is imperative to consider that ATs who were often athletes themselves may fall prey to the same stigma surrounding mental health concerns as the athletes with whom they work (Cutler & Dwyer,
2020; Loveless, Games, Shea, Thews, and Winkelmann, 2022; Stiller-Ostrowsky & Ostrowsky, 2009; Shwenk, 2000). The stigma surrounding mental health concerns, both for ATs and their athletes is a compounding variable serving as a barrier to ATs treating the whole person athlete.

Athletic trainers (ATs) have been found to be the most trusted people among athletes. Therefore, ATs are exceptional candidates for continued education in mental health, including trauma sensitivity and broaching of mental health issues (Cutler & Dwyer, 2020; Neal et al., 2013; Stiller-Ostrowsky & Ostrowsky, 2009). Given their relationship to athletes, it is important that athletic trainers understand and recognize the impact of trauma and the mind-body connection and the importance of childhood events. Evidence suggests that while psychosocial competencies have been introduced into accredited curricula to date, ATs lack competence in application of psychosocial interventions specifically around engagement of difficult conversations with athletes about mental health distress (Clement & Arvinen-Barrow, 2018).

**Problem Statement**

When athletic trainers consider physical injuries in athletes as performance issues only and ignore the role of physiologic stress responses, they fail to treat the whole body. Despite awareness of the connection between stress and injury, athletic trainers lack self-efficacy to engage in emotionally focused conversations with athletes (Arvinen-Barrow, 2018). Their lack of self-efficacy creates sub-optimal treatment, missed opportunities to treat athletes’ emotional distress, and reinforces the stigma of weakness in seeking mental health care in sports culture (Clement & Arvinen-Barrow, 2018; Cutler & Dwyer, 2020; Gulliver et al., 2012).

**Purpose of the Study**

The purpose of this study had two important aims. The primary aim was to explore the effects of a whole person athletic training workshop on Athletic Training Education Program
(ATEP) student’s awareness of trauma and communication competency. It was expected that the whole person AT workshop would increase trauma awareness and communication competency, allowing ATEPs to look beyond their athletes’ physical injury as primarily a performance concern and be better equipped to consider the broader lens necessary for holistic recovery. The secondary aim of this study was to utilize qualitative inquiry to explore how ATEPs’ own history and experiences contributed to the results of the quantitative measurements.

A mixed methods sequential explanatory study was used to assess the effects of a whole person AT workshop on ATEPs’ awareness of trauma and perceptions of competence communicating with athletes about mental health issues. The Trauma System Readiness Tool (Chadwick Trauma Informed System Project, 2013) was used to assess ATEPs’ awareness of the connection between trauma and injury. The Screener of Communicative Competency Scale (Weimann, 1977) was used to assess ATEPs’ comfort with conversations surrounding mental health. Instruments were administered pre and post-completion of a whole person athletic training workshop within an accredited athletic training graduate program. Qualitative post-interviews helped explain what contributed to assessment responses.

The dual aims of the study addressed the gap in orienting ATEPs to mental health wellness and treating the athlete as a whole person. The need for increased awareness and research became clear as larger systemic issues in athletics were considered. While athletes are under extreme pressure and we have knowledge of their mental health concerns, the culture of sport continues to make it difficult for athletes to seek help. Whole person AT armed ATEPs with the awareness, knowledge and skills to address mental health concerns as athletes present them. Further, understanding what contributed to ATEPs’ decision to broach mental health topics...
with athletes as they relate to injury and recovery assisted in us understanding the depth of the mental health stigma in sport and how to combat it.

Research Questions:

1. How will a whole person athletic training workshop (IV) influence the trauma awareness (DV1) and perceptions of competence in communication (DV2) among Athletic Training Education Program students (ATEPs)?
2. What contributes to ATEPs’ trauma awareness and perceptions of competence in communication?

Hypotheses

Hypothesis 1

ATEPs who complete a whole person athletic training workshop will demonstrate statistically significant increases in scores on the Trauma System Readiness Tool (Chadwick Trauma Informed Systems Project, 2013) from pretest to posttest.

H10: There will be no difference in ATEPs’ scores on the Trauma System Readiness Tool (Chadwick Trauma Informed Systems Project, 2013) from pretest to posttest as a result of completing a whole person athletic training workshop.

Hypothesis 2

ATEPs who complete a whole person athletic training workshop will demonstrate statistically significant increases in scores on the Screener of Communicative Competency Scale (Weimann, 1977) from pretest to posttest.

H20: There will be no difference in scores on the Screener of Communicative Competency Scale (Weimann, 1977) from pretest to posttest as a result of completing a whole person athletic training workshop.
A mixed method sequential explanatory research design will be used to assess the effects of the trauma awareness workshop, and to understand what contributes to ATEPs’ trauma awareness and perceptions of competence in communication.

**Definition of Terms**

**Whole Person**: the entirety of a person’s mental, emotional, physical, social, and spiritual dimensions.

**Mind-Body Connection**: The well-established research that supports that psychological information is linked with physical sensations. This includes traumatic experiences that a person may witness and later find that they can identify a physical manifestation or sensations associated with experiences.

**Athletic Trainers**: For the purpose of this research, athletic trainers are individuals who are currently in their first or second year of the master’s level athletic training program at the University of Montana.

**Traumatic Experiences**: A person’s perception of a past experience as having a) been threatening, b) resulted in a negative reaction, and/or c) exceeded a person’s resources available to cope with the event.

**Stress Response**: the relationship between how an individual perceives a stressful external situation and their corresponding physiological manifestations.

**Physical Injury in athletes**: any physically painful experience to an athlete that in some way inhibits their ability to perform their sport and/or interrupts their daily functioning.

**Psychological Aspects of Injury**: For athletes specifically, feelings of social isolation, depression, increased fatigue, lack of motivation for previously enjoyed activities, difficulty
paying attention, feeling of increased anxiousness around how long until they may be able to participate in their sport.

**Adverse Childhood Experiences (ACEs):** The CDC now defines ACEs as all types of abuse, neglect, and other potentially traumatic experiences under the age of 18 (Houry, 2019; Larki et al., 1998). Examples may include physical and emotional abuse or neglect, witnessing violence, serious mental illness, or substance abuse in the home (Houry, 2019).

**NCAA:** The National Collegiate Athletic Association is a member-led organization dedicated to the well-being and lifelong success of college athletes. Member representatives serve on committees that propose rules and policies surrounding college sports. Members ultimately decide which rules to adopt – everything from recruiting and compliance to academics and championships – and implement them on college campuses.

**Mental Wellness:** “A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (World Health Organization, 2022). Mental wellness is the balance between emotional, physical, spiritual, and mental parts of self.

**Psychosocial History:** Many factors affecting current levels of functioning - how someone feels, whether one is to get sick, how quickly someone recovers, their response to stress and other conditions. Relevant information is related to psychological or mental health, social history and many other factors such as health, employment, finances, education, religion, stress and support network, including friends and family. Aspects such as family history of depression, previous suicide attempts, medication or drug use, work or family stress and types of resources, including family or community help and finances, provide an evaluator with necessary information.
**NATA**: National Athletic Training Association, the governing body that is responsible for certifying athletic training programs.

**BOC**: Board of Certification, governing body that produces standards for ATs to pass in order to become certified athletic trainers.

**CAATE**: Commission on Accreditation of the Athletic Training Education, assesses competencies to be added and removed to curriculum for athletic training students.

**Self-efficacy**: According to Albert Bandura, (1977), self-efficacy is "the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations" (1995, p.2). Self-efficacy is a person’s belief in their ability to succeed in a particular situation. Such beliefs play a role in determining how people think, behave, and feel.

**HIPAA**: Health Insurance Portability and Accountability Act, The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal law that required the creation of national standards to protect sensitive patient health information from being disclosed without the patient’s consent or knowledge. The Privacy Rule standards address the use and disclosure of individuals’ health information (known as protected health information or PHI) by entities subject to the Privacy Rule. These individuals and organizations are called “covered entities.” The Privacy Rule also contains standards for individuals’ rights to understand and control how their health information is used. A major goal of the Privacy Rule is to make sure that individuals’ health information is properly protected while allowing the flow of health information needed to provide and promote high-quality healthcare, and to protect the public’s health and well-being. The Privacy Rule permits important uses of information while protecting the privacy of people who seek care and healing.

**Delimitations**
This study was limited to athletic training education program students (ATEPs) in the master’s level Athletic Training program at the University of Montana. This group of participants was chosen due to their proximity, availability, and willingness to participate in the training. Additional students that work with athletes as well as coaches and sports practitioners were excluded from this study because the purpose of this study was to address the specific gap in athletic training regarding recognizing and responding to mental health issues. One of the main research objectives was to shift the lens in how practitioners view physical injury in athletes which drove the parameters of the study. Mental health care in the culture of sports is tenuous at best and continues to hold a stigma for athletes seeking help, therefore, it seemed an appropriate population to begin with athletic trainers.

**Validity within Mixed Methods Research**

Mixed methods research essentially utilizes a combination of both quantitative and qualitative characteristics making it important to identify threats to validity within each component (Creswell and Plano Clark, 2007; Tashakkori and Teddlie, 2010; Yin, 2009). The proposed study was at risk to a few threats to internal experimental validity within the quantitative component including history, testing, selection bias, mortality, and experimenter bias. History served as a potential threat due to unplanned events that possibly occurred during the treatment phase of the research. The whole person athletic training workshop was provided for a whole day. During that day there was the risk of something happening that was unanticipated and out of the researcher’s control. Testing was a potential threat as the participants were given a pre-test which could have influenced how they responded on the post-test. Selection bias was a validity threat due to lack of random assignment to treatment or control group. The researcher provided the workshop to the entire athletic training program, and the
study therefore lacked a control group due to a small sample size of eligible participants. There was some mortality present in this study, as not all participants completed the post-test as requested after the workshop. I encouraged completion of the post-test through mentioning it at the training and sending an email reminder with a link to the post-test. Finally, experimenter bias was a potential threat as I co-facilitated the workshop as well as engaged in follow-up interviews with the participants for the qualitative phase. However, to limit this bias, I bracketed as much as possible my own values and beliefs as well as engaged in reflexive journaling and member checking to be sure interpretations and analyses matched what the participants relayed.

Threats of external experimental validity in the proposed research included interference of prior treatment, the reactive effects of testing and treatment, and interaction of selection and treatment. Interference of prior treatment was likely to be the largest threat to external validity as it is impossible that participants’ lived experience were equal throughout the group (Sheperis et al., 2017). Particularly salient to the proposed research was a primary focus on childhood trauma; if participants had a history of trauma and had received education, support, or counseling surrounding their experience, it may have impacted the outcomes of their assessments. Reactive effects of testing were a potential threat as the pre-test may have impacted how the participants answer the post-test and it would have been difficult to discern if responses were specifically influenced by the treatment. However, the mixed methods design enabled me to engage in interviews with the participants to better understand their scores on the pre and post-test and best explain if the treatment is what caused outcomes. Finally, the interaction of selection and treatment was a potential threat due to the fact that convenience sampling made it difficult to ensure that the selected participants were representative of the target population.
Creswell and Plano Clark (2007) speak specifically to potential threats to validity of sequential designs in mixed methods which are addressed in data collection including selecting the same or different individuals for qualitative and quantitative components, using the same sample sizes for both components, and not choosing participants for follow-up interviews who help explain significant results. However, to minimize these threats, I selected the same individuals for both components and used a larger sample size for the quantitative component. Within the data analysis, Creswell and Plano Clark (2007) speak to potential threats being choosing weak quantitative results to follow up on and not addressing the common validity issues in quantitative research. To account for these and minimize the threat, I chose significant results to follow up with qualitative interviews, and addressed both quantitative and qualitative validity concerns. This is further supported by Tashakkori and Teddlie (2010) who state that in a sequential mixed method design the core component of the design must be maintained, this being the quantitative phase. Tashakkori and Teddlie (2010) emphasize that the researcher must stay true to the overall design and stay consistent with the quantitative emphasis on deductive reasoning. A qualitative case study was used to explain results of the quantitative analysis, with the main emphasis of the research being quantitative.

Considerations for validity within case study research are the following: a) multiple cases need to consider resource limitations, b) case selection, and c) cross-analysis. More than one case can weaken the potential of depth one may uncover if the researcher is looking at one case only from a variety of angles. Researchers generally choose no more than four or five cases, however, there is no exact number as to how many cases to study. In the case of my research, I chose through voluntary selection, cross referenced to initial ACE scores, as well as assessed significant changes from pretest to posttest administrations of the instruments to determine how
many cases I chose. This is supported further by Yin (2009) in Sheperis et al. (2017) who states that experimental and case study design complement one another through identification that a treatment works and then using case study to “explore how and why it works and further validate the efficacy of the treatment” (Yin, 2009, p. 8). Yin (2009) identifies two specific threats to internal validity as cautionary within case study research, specifically explanatory case studies. It is possible to look for why the treatment caused a particular outcome without considering a third factor that may have been the reason for causation. The second threat is the issue with making inferences about the results and whether all the possibilities of cause for the change have been considered and explained. Sheperis et al. (2017) identify the limitations of qualitative research as rigor and generalizability. Notable, however, is that case study design has been identified as contributing to practice and theory in a generalizable way through a thorough explanation of the results.

To maintain rigor within both quantitative and qualitative phases of the research design, there were two points of interface within the analysis and the results section. The quantitative data analysis phase assisted in identifying participants for the supplemental qualitative component. The interface or integration of both paradigms is the beauty of mixed methods research and should combine the complementary strengths of each method (Onwuegbuzie & Johnson, 2006; Tashakkori & Teddlie, 2010). The other interface was the qualitative results which are provided in a narrative, assisting in explanation of the quantitative results.

**Significance of the Study**

Given the prevalence of childhood traumatic experiences reported in the general population, it is valuable to consider athletes as their physicality is often under the microscope. Literature focused on stress and injury is well documented, yet sports practitioners continue to
treat physical injury as primarily a performance concern (Arvinen-Barro & Clement, 2016). Furthermore, the physical stress that athletes are under by virtue of being an athlete, may amplify the way their bodies react to stressful situations by generating a physiologic stress response which can contribute to injury, and prevent recovery (Appaneal & Perna, 2014; Williams & Andersen, 1998). Engaging ATEPs in a Whole Person Athletic Training workshop could provide them with the skills and confidence to address mental health concerns presenting in their athletes, improving their overall wellness and their participation in their sport.

**Summary**

There is a clearly established connection between stress and injury in athletes, yet, there continues to be a pattern of viewing physical injury in athletes as primarily a performance issue. Better preparing ATEPs to acknowledge childhood trauma in athletes and communicate about mental health concerns could impact athlete recovery, prevent future injury, and more quickly return athletes to their sport. The implementation of a Whole Person Athletic Training workshop may have increased the likelihood that ATEPs will take a mind-body approach in their work with athletes. The objectives of the workshop encouraged ATEPs to look beyond physical injury as being a performance issue only, aimed to increase athletes’ help seeking behaviors, and reinforced positive mental health culture in sport. The following literature review will address historical context, multiple studies in stress and injury, how the culture of sport and stigma of mental health has been solidified, and finally point to the gap in athletic training competency which provided further rationale for the mixed methods sequential explanatory study.
CHAPTER 2: Review of the Literature

The literature reviewed below provides the rationale for athletic trainers’ (ATs’) education and practical skill building surrounding mental health issues in athletes. While athlete mental health has moved into the spotlight through recognition by the NCAA, the literature will show barriers of communication competency and awareness of how ACEs may contribute to athletic injury (Cutler & Dwyer, 2020; Neal et al, 2013; Stiller-Ostrowsky & Ostrowsky, 2009). There is a continued lack of education, focus, and practice in how to address mental health struggles with athletes. In addition, there continues to be a stigma in athletic culture around help-seeking behaviors (Gulliver, Griffiths & Christensen, 2012). Considering the systemic issues that trickle down directly to athletes, this research begins with a broad overview of how mental health is seen in sport culture and narrows down to athletic trainers and their specific work with student athletes within a collegiate setting. The literature clearly addresses the need for ATs to treat the whole person athlete through increased education in psychosocial concerns and development of supportive skills within athletic training.

The Physical Impacts of Trauma in Athletes

The body has a way of remembering trauma through “historical remnants of our own earlier experiences that linger in our muscles” (Badenoch, 2018, p. 59). A renowned trauma specialist, Bonnie Badenoch (2018), writes “[if] we have embedded traumas from long ago, we are all children deep inside, where time has stopped as the trauma is held safely away from our conscious awareness in our subcortical circuits and bodies” (p. 111). When a person who has experienced trauma moves into a stress response, “numerous pathways send messages to tighten our muscles. . . and narrowing the focus of our eyes” (p. 59). When applied to athletes, it makes
sense that ACEs can have a significant impact on athletic performance, physical injury, and injury recovery.

The experience of an ACE disrupts the way the body manages and reacts to stressful situations. The physical stress that athletes are under by virtue of being an athlete, may amplify the way their bodies are reacting to a stressful situation by generating a physiologic stress response which can contribute to injury (Appaneal & Perna, 2014; Williams & Andersen, 1998). Physiologic stress responses may include difficulty rehabilitating after injury, difficulties sleeping, disordered eating, and headaches and muscle stiffness or inflammation. Athletes, especially student athletes, often have full time jobs in addition to their academics. They have rigorous academic expectations and are expected to push through even when feeling fatigued. Athletes are exposed to physical and academic scrutiny allowing for less time to focus on recovery, adequate nutrition, and sleep (Cutler & Dwyer, 2020). Additional mental stressors include the ability to meet training demands, fears of failure, and constant pressure to live up to the expectations of others (Appaneal & Perna, 2014).

There are well-documented physical concerns in athletes that may be related to ACEs. There is an established connection between stress and injury in athletes, however, we continue to neglect the body’s stress response system that has been impacted by traumatic events. Physiologic indicators of traumatic experiences in athletes may include low energy, headaches, and chronic pain (Wilson & Pritchard, 2005), sluggishness, irritability, sleep disruption, and anxiety (Schwenk, 2000). Given the knowledge of how traumatic experiences can exist in the body it is crucial that we consider how childhood events can function as precursors to impairment in stress response, contributing to physical injury in athletes. Impaired stress response leads to increased muscle tightness, fear of reinjury, decreased ability to recover from
injury, pressure to hide physical injuries, and overall decrease in performance and mental well-being of athletes. Athletes with good mental health have a better chance of performing well over the long-term with reduced risk of career-ending issues (Cutler & Dwyer, 2020; Henriksen et al., 2018).

Assessing Stress Response and Injury

There is research to support the connection between stress and injury in athletes, which has resulted in several screening instruments meant to assess athletic injury and recovery experiences. The following review discusses some of the research to support the connection between stress and injury, and how it has been assessed. The three main screening tools utilized in the AT field are the Social Readjustment Rating Scale (SRSS), followed by the Social and Athletic Readjustment Rating Scale (SARRS) including the Athlete Schedule of Recent Experience (ASRE), and the Life Experiences Survey (LES). Development and validation of these instruments have contributed to the creation of the Stress and Injury model in 1998 (Bramwell et al., 1975; Holmes & Rahe, 1967; Sarason et al., 1978; Williams & Andersen, 1998). Holmes and Rahe (1967) developed the Social Readjustment Rating Scale (SRSS) after noticing the relationship between life stress and physical symptomology in athletes. Their research hypothesized that experiencing life events causes the body to adapt, leading to increased stress on the body and an increased risk for physical illness. Their findings paved the way for researchers focusing on athletic injury to begin to consider how the body manages stress, which includes daily stressors, and specifically how stress may have an impact on physical injury.

Following closely behind the development of the SRRS, Bramwell et al. (1975) modified the SRSS to include athletes, naming it the Social and Athletic Readjustment Rating Scale (SARRS). Modifications were made following a study with college football players to include
preliminary questionnaires asking players to list factors they thought would or did influence their performance and behavior. Notably, items added included potentially emotionally stressful experiences including a sibling leaving home, changing to a new school, discrimination from community, playing time lost due to injury, and changes in responsibilities. The results prompted part two of the study, also done with college football players, to specifically examine the relationship between athletic injury and magnitude of potentially distressing life events that may have contributed to the injury itself (Bramwell et al., 1975). Potentially distressing life events include loss of a family member, difficulty with their coach, or dissolution of romantic relationships, which all were shown to increase the overall stress experienced by the players indicating a need for more specific questions. This study was integral in solidifying the connection between life stressors and physical injury in athletes, leading researchers in the area to take notice. Bramwell et al. (1975, p. 18) posit that “each individual must react to the conditions in accordance with his perception of the situation and the ability to respond based on that perception. . .” Perceptions of the magnitude of stressful events influence our stress response system, pointing to the importance of considering childhood traumatic events.

Bramwell et al. (1975) helped to draw the focus to the power of perception - how we perceive a situation impacts how ‘stressed’ we become about it. What we know about traumatic experiences is that after experiencing a traumatic event our body perceives similar events as more stressful than they may be to someone who has not experienced a traumatic event. Current stressors, such as those present in the life of an athlete, literally interrupt our perceptions through the physiologic stress response (Gabor, 2019; Van der Kolk, 2014). Bramwell et al.’s (1975) awareness of traumatic experiences and stress response in the body made them pioneers in bringing attention to the relationship between life events and injury in collegiate athletes. There
continues to be a gap, however, in assessing how childhood stressful experiences may impact the stress response system, hence influencing the perception of more recent life distress.

Sarason et al. (1978) and Passar and Sees (1983) developed two instruments that continued building awareness of the connection between negative life events and the prevalence of athletic injury. The first was Sarason et al.’s (1978) development of The Life Experiences Survey (LES). The LES is a 57-item questionnaire broken into two sections - one focused on potentially distressing events by gender, and the second focused on students. Stressful events by gender included abortion, pregnancy, change in husband’s work, change in wife’s work, dissolution with significant other, and serious injury or illness. The second section which was designed for students included measures of conflict with teammates, troubles with the head coach, and performance acknowledgement by head coach. The results indicated that negative life experiences were significantly higher for injured players. Results specifically note a correlation with athletes who had experienced a loss (death of a friend, relationship dissolution) and athletic injury. These results suggest that athletic injury can be related to a prior negative life change (Passar & Sees, 1983; Sarason et al., 1978).

Passar and Sees (1983) adapted the LES to an athlete population. Their findings report a significant relationship between negative life events and risk of injury for football players. Petrie (2010) later assessed The Life Experiences Survey (LES) for validity and reliability. Petrie (2010) determined that additional items were needed due to the limited reliability of the LES. The LES was originally studied with specific sport and situation creating difficulty with generalizability to the entire athletic population. Petrie added moderator variables of social support and coping resources as she posited these could impact the stress and injury relationship (2020). Petrie conducted a study with college gymnasts comparing the (LES) with the SARRS,
including the Social Support Questionnaire (SSQ). She (2010) found that the LES was the only instrument specific enough to demonstrate a significant relationship between stress and physical injury, suggesting that the LES is a more valid measure of the relationship between life stress and injury. The results of the aforementioned instruments were valuable in establishing a clear connection between the perception of negative life events with consideration of moderator variables including coping resources and social supports, and athletic injury. This established awareness that the greater the athlete’s perception (or rating) of experiencing a negative life event, the greater the impact on physical injury. While the research of the time was clearly connecting stress and injury in athletes, researchers had yet to establish how childhood traumatic experiences can stay with the body and later impact physical injury.

The Stress & Injury Model. Williams and Andersen (1998), in response to research establishing the connection between life events and physical symptoms, developed the Stress and Injury Model. Figure 1 shows their careful illustration of the relationship between how an athlete perceives a stressful external situation and their corresponding physiological stress response. If we consider an analogy of a child losing their parent to a car accident when young, we can imagine that as an adult they may be triggered by a car accident as they perceive it as stressful akin to their experience as a child. Their stress response system is perceiving the event as more stressful than it may actually be, resulting in muscle tightness, muscle imbalances, feelings of worry and difficulty focusing (Badenoch, 2018; Gabor, 2019; Van de Kolk, 2014). These may be moderated due to the person’s coping skills and/or support system. However, if those protective factors are weak, there is a likelihood of injury as shown within the Stress and Injury Model (Williams & Andersen, 1998) pictured below.

Figure 1
The Stress and Injury Model


Note. Reprinted with permission (M. B. Andersen, personal communication, June 13, 2022).

Williams and Andersen’s (1998) model created new knowledge of how increases in stress response can contribute to an increase in injury in athletes. Williams and Andersen (1998) explained that the stress response is more likely to activate and manifest itself physiologically at times of higher state anxiety. In athletes, higher state anxiety refers to the athlete’s perceived inability to meet the demands of their sport, fears of failure, and/or striving for approval and enhanced performance. Williams and Andersen’s (1998) model paved the way for much later studies specific to the association of stress and injury with athletes. Later studies focused on stress and identify it as a psychological risk factor for athletic injury because it increases muscle tension that places increased strain on muscles, joints, and ligaments (Singh & Conroy, 2017; Wilson & Pritchard, 2005).

Knowing about the body’s stress response is integral when we consider physical injury, however, it is as important to consider the childhood traumatic events that impact the stress
response system. Experiencing an impairment in the stress system early in our lives impacts the way we manage stress. Williams and Andersen’s (1998) Stress and Injury Model laid the groundwork for additional investigation, considering that athletes are placed under an increased amount of stress by virtue of being an athlete. The Stress and Injury Model also suggests that coping skills and personality can impact how athletes manage stress. Coping skills and personality characteristics are established early in life (Williams & Andersen, 1998). Bringing our awareness to significant childhood events, or ACEs, which can impact athletes’ stress response can help ATs understand the nature and prevalence of athletic injury in the first place, directly influencing recovery.

**Biopsychosocial Model of Stress and Athletic Injury.** In 2014, the Stress and Injury Model was adapted by Renee Appaneal and Frank Perna, and renamed the Biopsychosocial Model of Stress, Athletic Injury, and Health (BMSAIH). Depicted below as Figure 2, the BMSAIH was designed to enhance our understanding of the pathways between stress response and injury including behavioral factors that impact sports participation.

**Figure 2**

*Biopsychosocial Model of Stress, Athletic Injury, and Health*
The central tenet of the BMSAIH is that psychosocial distress (e.g., negative life events) may act “synergistically with training-related stress as a result of high-intensity and high-volume sports training” (Appaneal & Perna, 2014, p. 3). The BMSAIH provides an important framework that has enhanced insight into the multi-faceted nature of the injury process by building on Williams and Andersen’s (1998) model that includes physiological markers of training-related stress. Appaneal and Perna (2014) drew on earlier work by Petrie and Perna (2004) who focused on hormonal patterns in response to stress and correlated the hormonal response patterns to negative health impacts. Additionally noted is that fatigue and depression are often symptoms of over-trained athletes and may impact cortisol secretion or elevation. Petrie and Perna’s (2004)
research identified that the hormonal response patterns have been found to occur when individuals experience ‘frequent negative life stress.’ When an athlete experiences frequent negative life stress including interpersonal struggles, the pressure of daily demands become overwhelming. The overwhelm and increased stress associated with balancing jobs or academics and their sport, causes their bodies to release an increase in the stress hormones epinephrine and cortisol. This serves as an important facet of the development of the BMSAIH as this overactivation may be exacerbated by demands of heavy exercise in athletes, contributing to physical injury (Appaneal & Perna, 2014). Given the work of Petrie and Perna (2004), Appaneal and Perna (2014) demonstrate through their research that negative emotions increase stress hormones which increase susceptibility to injury.

The development of the BMSAIH suggests that the effects of psychosocial stress on health would be most pronounced in high-volume periods of training. The relationship between psychosocial stress and athletic injury should be considered in the development of sport training cycles (Appaneal & Perna, 2014). The BMSAIH was the initial introduction to a more holistic model that attended to psychosocial aspects contributing to injury in athletes. Ivarsson et al. (2013) explored stress and injury specifically in collegiate athletes, investigating how specific psychosocial variables interact and influence injury risk in Swedish soccer players. Variables included anxiety, history of stressors (negative life events, daily stressors), and maladaptive coping skills. Ivarsson et al. (2013) used a variety of screening instruments including and not limited to the Swedish Scale of Personality, Life Events Survey for Collegiate Athletes, and Injury Frequency. Their findings indicated a direct relationship between anxiety, negative life event stress, and injury prediction. Interestingly they found no relationship between maladaptive coping strategies and injury occurrence. Ivarsson et al. (2013) suggest that anxiety may
“augment the likelihood that an individual will appraise a situation as threatening, thereby increasing the physiological stress response and subsequent likelihood of injury” (p. 23). Their findings point directly to increases in anxiety that may lead to increases in injury. Despite the many research studies connecting stress and injury, there continues to be little focus on the importance of acknowledging ACEs as contributing factors to the magnification of a stress response, increasing anxiety and therefore contributing to injury.

The literature on trauma and injury has outlined the importance of screening instruments and comprehensive studies that address the connection between psychosocial stressors and injury in athletes (Appaneal & Perna, 2014; Bramwell et al., 1975; Williams & Andersen, 1998). Athletic trainers (ATs) have been identified as having close relationships with athletes, and their training could be enhanced by conceptualizing physical injury from a more holistic perspective. It is important to consider how to incorporate the many research studies supporting the mind-body connection, including ACEs within athletic training. One factor potentially preventing integration of a mind-body focus into athletic training is the stigma surrounding mental health issues. The stigma surrounding mental health issues is prevalent in modern society at large, but perhaps even more pronounced in athletic culture.

**Stigma of Mental Health in Athletic Culture**

While there is a historical awareness of stress response, negative life events, and mental health in athletes, a larger underlying concern is the stigma of mental health in sport culture. The stigma creates a clear barrier in adopting a holistic approach with athletes. A historical view of the stigma and discomfort that athletes have in seeking mental health care is more specific to mental health care as research supports that athletes are more inclined to reach out for care when
experiencing physical ailments than for mental health issues (Schwenk, 2000). In many cases, athletes’ concerns continue to be viewed as a training or performance issue regardless of the nature of the concern. According to Schwenk (2000), at times athletes express concerns that, if presented in other contexts, might warrant a referral for counseling such as sleep disruption or lack of enjoyment in sport, however, presenting problems are not often viewed as mental health concerns. This suggests an ongoing dilemma of underdiagnosing mental health concerns and inadequate treatment for athletes. Additionally, underdiagnosing mental health concerns may reinforce athletes’ feelings of weakness, fear of asking for help, and their need to focus on their performance rather than psychological stressors.

Athletes’ fear of appearing ‘weak’ has been named in the literature as ‘mental toughness’ and reinforced throughout sport culture (Gucciardi et al., 2015; Neal et al., 2013; Stamatis et al., 2020). In 2020, Stamatis et al., introduced a study intended to shift the historical stigma and speak to athletes’ well-being ‘compromised by symptoms of mental health disorders.’ Their study compared mental toughness, self-compassion, and mental health stressors within a group of student athletes. It involved a sample of 542 student athletes and collected data through a mental toughness index, self-compassion scale, and mental health continuum. Findings suggested a positive correlation between mental toughness, self-compassion, and mental health. From this, Stamatis et al. (2020) suggests that NCAA mental health best practices should include training athletes in both mental toughness and self-compassion, rather than mental toughness alone. To reduce barriers within sport culture, it is important for sports practitioners to introduce mindfulness practices, and the concept that mental toughness and self-compassion can happen concurrently. Unfortunately, coaches who have been conditioned within mental toughness models may “balk at the perceived softness of self-compassion” (Gucciardi et al., 2015; Stamatis
et al., 2020, p. 13). The shift in focus to a more self-compassionate approach with athletes demonstrates a holistic view which may decrease the barriers that athletes face in seeking help (Neal et al., 2013; Ostrovecky, 2017). An appropriate place to introduce the concept of self-compassion, especially as it relates to healing from a sports injury, is in the athletic training room.

Despite the research supporting an increased focus on mental health in sports culture, athletic trainers continue to demonstrate shortcomings in applying psychosocial competencies and strategies in working with athletes (Clement & Arvinen-Barrow, 2018). Unfortunately, perhaps as a result of the continued lack of education, focus, and practice of addressing mental health struggles with athletes, the stigma of help-seeking behaviors remains strong in the athletic culture (Gulliver et al., 2012). The systemic view of mental health in sport culture trickles down directly to athletes. The absence of help-seeking behaviors in athletic culture and continued stigma indicates a clear need for ATs to seek continuing education, training in psychosocial strategies, and to develop increased competency engaging in conversations with their athletes about mental health concerns (Cutler & Dwyer, 2020).

**Athletic Trainer History and Competencies**

Athletic trainers are historically known as allied professionals. They were initially grouped with physical therapists and nurses; practitioners who have clinical education as part of their curriculum. Clinical education originated from the medical-education paradigm designed for physicians (Weidner & Henning, 2002). Each of these disciplines engaged in clinical education through apprenticeships, or more commonly known as ‘clinicals’ in order to learn practical application of skills. Medical clinical education continued to develop post-civil war and the National Athletic Trainer’s Association (NATA) was established in 1950. (Laurent
& Weidner, 2002). According to athletic training historians, athletic training and clinical education solidified in the 1970s as the NATA Professional Education Committee identified behavioral objectives and learning outcomes for athletic training students (Delforge & Behnke, 1999). This development helped define the unique knowledge necessary for a certified athletic trainer (Laurent & Weidner, 2002). In 1983, the Professional Education Committee developed the first edition of the Competencies in Athletic Training (Delforge & Behnke, 1999). In 1990 the American Medical Association formally recognized athletic training as an allied health profession (Delforge & Behnke, 2002). Standards and guidelines were prepared by the Joint Review Committee on Educational Programs in Athletic Training and the Commission of Accreditation of Allied Health Education program adopted standards and guidelines in 1991.

The NATA Board of Certification (NATABOC) originally offered certification for athletic training students through either a formal education program, or an experiential based program with supplemental course work (Wiedner & Henning, 2002) Until the 2000s students could sit for the NATABOC exam upon completion of 600-800 clinical experience hours from an accredited program or 1800 hours as an apprenticeship student (Grace, 1999). Today’s athletic training students receive close supervision during clinical education, and the NATA Education Council’s website has developed a set of standards for clinical education. To date the NATABOC certification examination requires that all students complete an accredited entry-level athletic training program, (NATA, 2020, as cited in Delforge & Behnke, 1999).

ATs are defined by the NATA (2020, p. 5) as

Health care professionals who render service or treatment, under the direction of or in collaboration with a physician, in accordance with their education and training and the state’s statutes, rules, and regulations. As a part of the health care team, services provided
by athletic trainers include primary care, injury and illness prevention, wellness
promotion and education, emergent care, examination and clinical diagnosis, therapeutic
intervention, and rehabilitation of injuries and medical conditions.

ATs are recognized as researchers in many health fields including exertional-related heat illnesses, sudden death in sport, musculoskeletal injuries, and sport related concussion. Health organizations often call on NATA statements for best practices on health and safety of athletes (Diakogeorgiou, et al., 2021). The historical development of the profession laid the groundwork for the Commission on Accreditation of Allied Health Programs (CAATE) to shift the required degree for professional education and eligibility for the Board of Certification (BOC) examination to change to a master’s degree level in 2015. Educational institutions have slowly implemented this change with the latest students entering a bachelor’s level program in 2022 (Commission on Accreditation of Athletic Training Education, 2018).

The importance of historical context of athletic training as a profession includes specific focus on the psychosocial competencies. The National Athletic Training Association (NATA), the governing body responsible for certifying ATs, recognizes the importance of the inclusion of psychosocial competencies in eight content areas (NATA board of certification, 2011). Competencies include evidence-based practice, prevention and health promotion, clinical examination and diagnosis, acute care of injury and illness, therapeutic interventions, and psychosocial strategies and referral. The psychosocial strategies and referral require ATs to recognize athletes exhibiting abnormal social, emotional, and mental behaviors, and be able to intervene and refer these individuals as necessary. There is some flexibility in how programs fulfill these requirements according to the Commission on Accreditation of Athletic Training Education (CAATE). The variability in the programs explains why some ATs may not be
receiving adequate training in all competencies depending on the preferred focus of the program (Cormier & Zizzi, 2015).

Soon after the NATA added the psychosocial competencies, Neal et al. (2013) studied the development of a plan to recognize and refer student-athletes with psychological concerns. Their study focused on three pieces: 1) behavioral shifts observed in student-athletes, 2) the need for ATs to focus on athletic injury and psychological responses, and 3) the development of a plan to address psychological concerns in student-athletes. The athletic concerns included feelings of isolation after injury, fear of returning to sport, and increasing pressure from sport culture to continue on despite physical pain (Gucciardi et al., 2015; Neal et al., 2013). Neal et al. (2013) suggested the need for a solid plan or referral process for mental health evaluation and increased education in approaching the student-athlete with a potential psychological concern.

Van Raalte et al. (2015) surveyed athletic directors, coaches, and ATs about their mental health referral knowledge after completing a web-based psychoeducational program. The results further emphasized the importance of recognizing the mental health needs of athletes. Van Raalte et al. (2015) found the mental health referral knowledge to be similar between experimental and control groups, approximately 6.92/10, where 10 represents a high level of knowledge as to when a mental health issues is presenting. Their study suggested that ATs, specifically, desire to shift the responsibility onto the athletes to manage their own mental health struggles through a web-based intervention, rather than engaging in difficult conversations with their athletes. It makes sense that ATs would feel uncomfortable discussing mental health concerns with athletes given the lack of emphasis placed on mental health in sport culture. It is possible that athletic trainers are also susceptible to the same barriers in discussing mental health as the athletes they serve.
The desire to place the responsibility on athletes for their own mental health may be because ATs have been educated to believe that psychological care of any kind is out of their scope (Neal et al., 2013). Cormier and Zizzi (2015) further explored the discrepancy between ATs’ awareness of psychosocial competencies and difficulty implementing strategies with athletes. Their study attempted to assess AT skills in identifying psychological symptoms, selecting appropriate strategies, and making referrals using case vignettes. ATs were asked to rate the symptom of their vignette case, a next course of action, a psychosocial strategy, and their perceived role in that case. Cormier and Zizzi (2015) found that nearly 98% of participants believed facilitating psychological referral was a major job responsibility when athletes exhibited personal distress. Furthermore, 90% felt responsible for recognizing adaptive and maladaptive psychological responses during injury rehab. The startling finding is that only 43% thought it was their responsibility to implement psychosocial strategies with an athlete experiencing distress. This suggests that ATs are primarily concerned with physical aspects of rehabilitation more so than an application of a psychosocial strategy. While nearly 90% of ATs chose correctly in discerning low- and high-level mental health symptoms, fewer than half chose the appropriate psychosocial strategy and greater than half over-referred to mental health services. Results also found ATs to have difficulty when choosing appropriate strategies for each athlete. Unfortunately, to further emphasize this point, their findings state that ATs identified every strategy as helpful whereas the expert panel identified only four as helpful. A limitation of the study is that it favored younger ATs more familiar with and exposed to this type of education than more experienced/older ATs (Cormier & Zizzi, 2015). This further supports the need for ATs to engage in ongoing education and training in psychosocial strategies rather than referring the majority of their athletes onto mental health providers.
Barriers to AT Self-Efficacy

The flexibility in educational practices throughout AT training programs may be another reason that ATs may feel less competent in engaging in conversations with athletes about psychosocial concerns (Cormier & Zizzi, 2015; Hamson-Utley, 2010; Ostrowski & Ostrowski, 2009; Stiller-Ostrowski, 2010). Ostrowski and Ostrowski (2009) studied undergraduate educational preparation in psychosocial interventions with ATs. In the mixed methods study, 11 recently certified ATs were asked to discuss issues they experienced with athletes and rank how well their programs prepared them to address the concerns. Results suggested that ATs believed that eight types of social support should be given, however, none of the ATs recalled learning anything about social support in their undergraduate education, nor were they given practical experience in developing counseling skills for injured athletes (Ostrowski & Ostrowski, 2009). This study demonstrates the inconsistency of programs and the gap in ATs’ education in providing psychosocial support for athletes and knowing how to refer them for psychological issues. These results run contrary to Cormier and Zizzi’s (2015) later study suggesting that ATs are over-referring athletes to mental health providers. It is possible that AT programs have shifted from a lack of education in addressing psychosocial concerns to teaching ATs to refer all athletes with mental health concerns.

A complimentary study by Stiller-Ostrowski and Hamson-Utley (2010) assessed 1701 ATs’ satisfaction with their knowledge, technique, and application of psychosocial strategies learned in their programs. They found that the majority of ATs identified satisfaction in their education and confidence in their abilities related to communication, motivation, emotional response to injury, mental prep, social issues, and referral processes. Regarding psychoses, and mental skills training techniques, they were less satisfied and confident. Stiller-Ostrowski and Hamson-Utley (2010) concluded that ATs’ educational programs may be underpreparing
students for skills related to psychosocial competencies. They initiated further discussion on
techniques addressing the ‘real’ practical experience in working with athletes with psychosocial
concerns including role-playing, or other hands-on experiences. The researchers hypothesized a
possible reason for lacking hands-on experience may be due to the Health Insurance Portability
and Accountability Act (HIPAA). HIPAA may make it difficult for ATs to work directly with
athletes struggling with psychosocial issues in an internship setting. They also pose the question
of whether the clinical instructors are confident in their instruction of the techniques to address
mental health concerns. Finally, they question whether the ATs think the techniques are
necessary. The limitations of this study were a response rate of only 31.9% which makes it
difficult to generalize, however, considering the variety of studies in this area it seems that AT
programs could better prepare their ATs in psychosocial competencies.

Kamphoff et al. (2010) studied ATs’ perceptions of their preparation in the psychological
skills area. The study explored AT students’ perception of the importance and effectiveness of
psychological skills in the rehabilitation of sport injury and examined the differences in
perceived effectiveness for those with and without formal training. One hundred eighty athletic
training students from nine universities responded to 15 questions from the Attitudes About
Imagery scale (AAI), a common sports psychological skill, their educational preparation, use of,
and interest in psychological skills training. The results suggested that while AT students agreed
it is important that psychological aspects of injury are addressed, only 50.6% reported they had
taken a course in psychological skills training. There were no differences observed in
psychological skill between those with and without formal training. In summary, these studies
largely depict a theme of variation in educational programming, and a deficit in practical
application of psychosocial strategies (Kamphoff et al., 2010; Ostrowski & Ostrowski, 2009;
Stiller-Ostrowski & Ostrowski, 2009). Clearly, this implies increased need for further research with ATs on how they are applying skills addressed within their educational competencies.

Another major barrier that ATs face in addressing psychosocial issues as they relate to physical injury is a lack of competency in engaging in difficult conversations with athletes (Clement & Arvinen-Barrow, 2019). Clement and Arvinen-Barrow studied 132 ATs regarding their exposure to psychosocial issues and referral practices with athletes. They found that ATs inconsistently report competence and comfort in addressing mental health issues. ATs expressed responsibility and comfort discussing injury and non-injury related mental health concerns, except for substance use, feelings of hopelessness, isolation, and/or sexual orientation. Clement and Arvinen-Barrow (2018) note that feelings of incompetence will, in turn, trigger affective and emotional responses in the AT (e.g. anxiety or discomfort), which will then influence the ATs’ motivation to perform a task (i.e. discuss sensitive psychosocial and mental health issues with athletes). Clearly this study indicates a need for further education and self-efficacy building in athletic training programs to better prepare ATs to engage in conversations about psychosocial concerns including ACEs with their athletes.

Clement and Arvinen-Barrow’s (2018) findings are promising and possibly inspired by the NATA Executive Committee for Education’s inclusion of psychosocial competencies. Athletic trainers are now being tested on competencies that include theoretical background, psychosocial strategies, and mental health referrals. The referral process is specifically focused on identifying and describing symptoms of mental health disorders and personal or social conflict that may indicate the need for referral. While the training seems to have improved ATs’ abilities somewhat, there appears to be little research investigating ATs’ experience implementing the psychosocial skills they may have learned in their training programs. A distinct
gap in the research is regarding ATs’ comfort in connecting historically stressful experiences or adverse childhood experiences to the way athletes are managing stress in their present-day situations and how that can contribute to injury.

**Summary**

In summary, it seems important to address current research about ‘where we are now’ in terms of how mental health is viewed within athletic culture. Giles et al. (2020) suggests that while there is heightened focus on mental well-being of elite athletes, there continues to be sport-specific measures suggesting that we continue to view well-being of athletes in terms of their performance only. He addresses a consensus statement provided by the International Olympic Committee in 2019 that describes the importance of mental health in elite athletes, suggesting an intersection of mental health and athletic well-being. However, Giles et al. (2020, p. 1265) concludes that there continues to be little evidence-based “understanding of athletic well-being in sport.” This is suggestive of the need to shift the culture and view of mental health in athletes towards a more holistic approach.

There is a need for increased education about psychosocial issues in athletes and the application of psychosocial strategies. There appears to be a significant gap in the literature regarding how ATs might approach engaging in difficult conversations with their athletes. To increase well-being in athletes we need to shift the focus to ATs’ increased awareness of the intersection of childhood traumatic events, the stress response system, and physical injury. This will encourage ATs to look at physical injury through a different lens, incorporating integral adverse childhood experiences. Additionally, there is a clear call to action to decrease the stigma of mental health concerns in sport culture and introduce a more holistic approach to treatment of
athletes as whole people. This includes intervention to address ATs’ lack of self-efficacy in engaging in difficult conversations with student-athletes about mental health.

Unfortunately, despite shifts in education, the literature shows that ATs continue to view injury and psychosocial distress as primarily performance issues. Conclusively, research might address ATs’ psychosocial competencies, application of strategies, and engagement in conversations about mental health with athletes. A specific course incorporated into athletic training programs could provide ATEPs with specific awareness, knowledge, and skill for speaking with athletes about mental health distress. AT training programs may be enhanced by skills training and practice to improve AT confidence and competence in addressing mental health concerns with their athletes, and for considering the historical nature of their distress. The ultimate hope is to improve the overall mental health and wellness of athletes as people, which will undoubtedly improve their performance in their sport.
CHAPTER 3: Methodology

A mixed method sequential explanatory research design was used to assess the effects of a whole person athletic training workshop on ATEPs’ awareness of trauma and communication competency, and to understand what contributed to ATEPs’ trauma awareness and perceptions of competence in communication.

Rationale for use of mixed methods

A mixed-methods sequential explanatory design is best used when the quantitative results are inadequate to provide explanations of outcomes, and the problem will be better understood using qualitative data to explain the quantitative results using the words of the participants (Creswell & Plano Clark, 2007). The rationale for use of mixed methods in the research study was because a combination of quantitative and qualitative data provided a more complete picture of the quantitative results with in-depth knowledge from the participants’ experiences to explain the initial quantitative inquiry. The initial aim of the study was to measure the change in dependent variables as a result of the independent variable through the use of pre and post questionnaires administered before and after participation in a workshop. The secondary aim of the research was to use qualitative interviews to further understand and provide context around how the workshop impacted the participants and how their own experiences may have contributed to the quantitative results. Please see below for a depiction of the research design.

Figure 3

*Sequential Explanatory Mixed Method Design*
Theoretical Contributions/Philosophical Underpinnings of Mixed Methods Research

Mixed methods were chosen to best answer the research questions that would not be sufficiently answered by qualitative or quantitative approaches alone. Utilizing an explanatory approach within mixed methods design allowed this researcher to use qualitative data to explain the quantitative results of the study. Mixed methods allows the use of multiple worldviews and paradigms to address the problem and purpose of the study.

Worldview assumptions including nature of reality (ontology), how we know what we know (epistemology), the role values play in research (axiology), the process of research (methodology), and the language of research (rhetoric) addressed how this researcher conducted and reported results (Lincoln & Guba, 2000; Creswell, 2003 in Creswell & Clark, 2007).

Historically, Campbell and Fiske (1959) advocated for the collection of multiple forms of quantitative data to study portions of psychological traits, resulting in mixed methods approaches
to inquiry. However, it wasn’t until the 1980s when Green, Caracelli, and Graham (1989) wrote an article that laid the groundwork for mixed methods research design (Creswell & Clark, 2007). Creswell (1994) created a set of three types of designs and found studies that illustrated each type which helped Morgan (1998) create a decision matrix for determining the type of design to use. Newman and Benz (1998) and Tashakkori and Teddlie (1998) continued in the creation of mixed methods procedures. In 2005, Sage publications created a new journal called the Journal of Mixed Methods Research, further legitimizing the use of a mixed methods approach to inquiry (Creswell & Clark, 2007).

The quantitative portion of the mixed methods design utilized a post-positivistic worldview. This researcher made a claim for knowledge based on the reductionism or narrowing and focusing on select variables of trauma awareness and communication competency within the population of athletic trainers enrolled in a university athletic training master’s program. Participants were assessed using electronic self-report instruments prior to completing a whole person athletic training workshop, and again after completing the workshop.

Historically, the qualitative phase of the study reflects a constructivist worldview which provides understanding and meaning beyond the quantitative results that the participants provide. Qualitative interviews provided understanding and helped to explain how participants’ experience of the training, and personal histories contributed to the meaning of the quantitative results (Creswell & Clark, 2007). To better integrate the paradigms often utilized within quantitative and qualitative inquiry, the use of pragmatism as a worldview was optimal for the mixed methods approach to research (Creswell & Clark, 2007; Dewey, 2008; Morgan, 2014; Tashakkori and Teddlie, 2010).
Pragmatism is known as the ‘best’ paradigm that fits for mixed methods (Tashakkori & Teddlie, 2010; Creswell and Clark, 2007). The origin of Pragmatism dates back to the 1800s with Charles Sanders Peirce, a founder of the symbolic logic of relations. He was interested in a pragmatic method making concepts clear and creating effective definitions “with the spirit of the scientific method” (Dewey, 1925, p. 3). William James and James Dewey continued to explore philosophical pragmatism in the early 1900s as a way of determining implications of beliefs (Dewey, 1925). Dewey (1922/2008) promoted pragmatism as moving away from abstract concerns and towards an emphasis on the human experience. He identified two questions: 1) what are the sources of our beliefs? and, 2) what are the meanings of our actions? Dewey posits that experiences involve a process of interpretation, bringing the foundation of pragmatism in the use of mixed methods to focus in answering the research question (Dewey, 1925). Tashakkori and Teddlie (2010) more recently connected pragmatism and mixed methods as the most relevant worldview under the following assumptions: 1) both quantitative and qualitative research methods can be used in a single study, 2) the research question is the most important, 3) the forced choice between other paradigms can be let go, 4) the use of metaphysical concepts such as truth and reality can be let go, and 5) a practical and applied research philosophy should guide methodological choices (Creswell & Clark, 2007). Pragmatists often argue that research is no longer aimed at understanding how things are but is useful for scientists to create meaning. Utility calls for reflexive research practice more often seen within qualitative research. The unique nature of a mixed method research design is to utilize quantitative analysis to fill the gaps of qualitative inquiry or as in the proposed research, using qualitative inquiry to fill in interpretations of the quantitative analysis (Feilzer, 2010). Because pragmatism is focused primarily on answering the research question, it is best suited for mixed methods as mixed
methods is built upon addressing the research question initially with one methodology and using a second to best support further understanding of the results of the initial analysis (Creswell & Clark, 2007; Feilzer, 2010).

Role of the Researcher

The role of the researcher appeared differently in each phase of the study. In the quantitative phase, the researcher administered via email and using Qualtrics survey software the following instruments two weeks prior to the intervention: Adverse Childhood Experiences Survey (ACES, Felitti et al., 1998), Perceived Stress Scale-10 (PSS-10; Cohen, 1983), Trauma System Readiness Tool (TSRT; Conradi & Wilson, 2011), and Communication Competency Scale (CCS; Weimann, 1977). The time lapse between administration of the instruments and workshop participation was meant to avoid participant interaction with difficult material immediately prior to the workshop, and controlled for sensitivity to the intervention and posttest due to pretest exposure. The researcher was the co-facilitator of the Whole Person Athletic Training Workshop, and therefore interacted with participants during the intervention portion of the quantitative phase.

In the qualitative phase, the researcher had a more participatory role. Specific to qualitative research, Morrow (2005) wrote of the need for reflexivity in qualitative research, steeped in the knowledge that “positioning researchers as self-conscious, critical, and participatory analysts” creates a need for exploring one’s own “biases and assumptions that come from their own life experiences or interactions with research participants, which are often emotion-laden” (p. 254). I am a student at the University of Montana where the sample was conveniently chosen. As an endurance athlete myself, I have a healthy respect for the impact of physical injury on human psychology. Additionally, I am a counselor devoted to working with
people struggling with trauma and I have a belief in treating the whole person. Lipson (1991) expertly explains that the researcher’s lens will inadvertently be integrated within the data, emphasizing the importance of being aware of biases that may threaten the internal validity of data interpretation. Therefore, it seemed necessary to consider my own experiences and how they contributed to my lens when analyzing data and working with participants.

My own values contributed to my desire to assess competency in athletic trainers both around trauma awareness and ability to communicate well in difficult conversations with athletes. The chosen methodology was meant to address the larger purpose of shifting the lens in athletic training to consider the whole person when we look at physical injury in athletes. Because I have spent years learning and relearning about traumatic response and the use of various modalities to assist in others’ healing, it was important to bracket my own experiences. I am drawn to a somatic focus on the mind/body connection as it makes the most intuitive sense to me and has motivated my own neurobiological focus to improve my clinical practice. While I was involved in collecting data from follow up interviews with students for subjective interpretation which created potential for bias, it was important to note that procedures to attempt to limit my personal bias included member checking and having a co-facilitator of the workshop. Additionally, ethical guidelines maintained in clinical practice involved continually checking one’s own biases to limit interference within the therapeutic process. Final audits were done by my dissertation chair and dissertation committee for additional check of biases.

Phase 1: Quantitative: Non-Experimental Pre-Post Test Design

Participants
Twenty athletic training education program students were recruited from the athletic training education program (ATEP) at the University of Montana to participate in the Whole Person Athletic Training workshop offered on January 22nd, 2023. Of the 20 ATEP students recruited to complete Phase 1 of the study, 13 participants completed both pretest and posttest assessments. Within the sample there were two participants who identified as male and eleven identified as female. Eleven participants identified their age range spanning from 18-24, and only two participants reported a 25-30-year age range. Fifty-three percent of participants held a bachelor’s degree and 30% had completed a master’s degree. Sixty-nine percent of participants identified as White, 23% identified as other, and 7% identified as multiracial (as determined by endorsing more than one ethnic category on the demographic questionnaire). Eleven (84%) participants had engaged in mental health counseling, 12 (90%) had been injured, five (38%) identified their injury as chronic and four participants (32%) scored ‘3’ or higher on the ACEs questionnaire.

**Instrumentation**

**Adverse Childhood Experiences Survey (ACES)**

Felitti, and colleagues (1998) initially created the ACES to determine a relationship between adverse childhood experiences and long-term health consequences. There were 10 items included that assessed experiences of abuse, household disfunction including drug use and criminal activity by parents, and/or domestic violence. The ACES is a self-administered instrument and is to be completed by the individual without intervention of the staff. Felitti et al. (1998) and colleagues designed the instrument to be used in a confidential space due to the sensitive nature of the questions including the beginning statement to ensure care is trauma informed which reads:
This Questionnaire will be asking you some questions about events that happened during your childhood; specifically, the first 18 years of your life. The information you provide by answering these questions will allow us to better understand problems that may have occurred early in your life and allow us to explore how those problems may be impacting the challenges you are experiencing today. This can be very helpful in the success of your treatment.

The questionnaire is comprised of seven categories including three categories labeled as abuse and four categories labeled as household dysfunction. The abuse categories include psychological, physical, or sexual abuse. The household dysfunction categories include substance use, mental illness, violence against mother or stepmother, and criminal behavior (Larkin et al., 1998). Felitti et al., (1998) determined that the combination of risk factors was a good predictor of poor health outcomes. There have been multiple studies using the ACES that have linked these experiences to negative health outcomes in a wide variety of populations across the world, supporting the validity of the instrument. A variety of researchers have found the psychometric properties to include evidence of internal consistency in a variety of samples (Bruskas, 2013; Karateikin & Hill, 2019). Additionally, studies conducted over time focus on test-retest reliability and found it to be acceptable over intervals ranging from 6-20 months (Dube, Williamson, Felitti, & Anda, 2004; Mersky, Janczewski, & Topitzes, 2017). A subsequent study by Dobson, Pushch, Pool, and McKay (2021) note that there have been a number of measures of the ACES developed more recently with varying administrative elements and foci. They conducted a study to examine the validity of four of the most commonly used ACES scales with 283 adults in primary care settings. They found internal reliability to range from acceptable to highly acceptable as well as strong convergent validity when compared with
other scales, specifically a variation of the World Health Organization ACE-IQ (WHO ACE-IQ). Their results indicate that while vast research exists on the ACES questionnaire and its iterations, there is still more to study and capture especially among different stages of life facing various adversities and difficulties to secure longitudinal reliability, (Dobson, et al., 2021). Individuals receive a score from 0 to 10. It has been suggested that if an individual endorses one ACE, they have an 87% chance of endorsing another. A score of ‘3’ is considered to be at intermediate risk of health concerns, and a score of ‘4’ implies high risk for significant health issues. According to Stevens (2012) in studying the implications of ACES results, people with an ACE score of 4 are twice as likely to smoke and seven times more likely to struggle with alcoholism. Having an ACE score of 4 increases the risk of emphysema or chronic bronchitis by nearly 400%, and suicide by 1200% (Stevens, 2012). Please see Appendix C for the instrument.

**Perceived Stress Scale (PSS-10)**

The Perceived Stress Scale (PSS-10) is a 10-item questionnaire. The original PSS was developed in 1983 by Shelden Cohen to assess stress levels in people 12 years old and up. Cohen et al. (1983) conducted an early study to determine reliability of the PSS and found it showed adequate reliability and correlated the life-event scores with depressive, physical ailments, social anxiety and utilization of health services. Five years after its inception, the scale was shortened from the original 14 items to 10 items, now referred to as the PSS-10 (Lee, 2012). It is meant to assess how stressful or unpredictable and overwhelming life events have felt over the past month on a scale from 0 to 4 with 4 indicating very often and 0 indicating never. It is scored by first reversing scores for 4, 5, 7, and 8 and indicated accordingly on the scoring sheet. Individual scores can range from 0 to 40. Scores from 0-13 are considered low stress, 14-26 moderate stress, and 27-40 would be considered high perceived stress. The PSS-10 has been shown to have
good internal consistency in adults and university students (Lee, 2012). The PSS-10 has been tested and retested and found to be adequate in adults over a 2-week period and 4-week period (α > .70) (Lee, 2012). Lee (2012) conducted a systematic review and found that construct validity is sound with two consistent identified factors in adult and university student populations which are Perceived Helplessness and Self-Efficacy. Please see Appendix D for the instrument.

**Trauma System Readiness Tool (TSRT)**

The TSRT (modified specifically for athletic culture) will be used to assess awareness of the connection between trauma and injury. Developed in 2013 by the Chadwick Trauma-Informed Systems Project (CTISP) as part of the National Child Traumatic Stress Network, the TSRT is a self-report measure originally designed for child welfare systems to use as they assess the trauma-informed nature of their own system. The TSRT (Conradi & Wilson, 2011) is a 46-item instrument, and participants respond on a six-point Likert scale (from Strongly Disagree to Strongly Agree). The TSRT is free and can be adapted with permission. (Reprinted with permission, personal communication, L Conradi, May 2, 2022). No psychometric properties were reported in the literature. Please see Appendix E for the instrument.

**The Screener of Communicative Competence Scale (CCS)**

The CCS (Weimann, 1977) was developed to assess ATs’ perceptions of competence communicating about mental health issues. Weimann developed the instrument to measure communicative competency, or an ability to “choose among available communicative behaviors to accomplish one’s own interpersonal goals during an encounter. . .” (Weimann, 1977, p. 363). The CCS is a 35-item questionnaire that uses a Likert scale ranging from Strongly Agree (SA), to Strongly Disagree (SD) and it takes less than 5 minutes to complete. There is strong evidence of internal consistency of the CCS. Various studies (Cupach & Splitzberg, 1983; Hazelton &
Cupach, 1986; Query, Parry, & Flint, 1992; Street, Mulac, & Weimann, 1988; Weimann, 1977) report coefficient alphas ranging from 0.68-0.96. Construct validity of the CCS was established by comparing, in measured time lapses, rates of speech and multiple other dispositions of communication adaptability and self-rated competence (Backlund, 1978; Cegala et al, 1982; Cupach & Splitzberg, 1983; Douglas, 1991; Hazleton & Cupach, 1986; Query et al, 1992). Please see Appendix F for the instrument.

**Quantitative Research Design**

Two weeks prior to the Whole Person Athletic Training workshop, participants were emailed an informed consent document as well as the aforementioned instruments to complete the pretest: Adverse Childhood Experiences Survey (ACES; Felitti et al., 1998), Perceived Stress Scale (PSS-10; Cohen, 1983), Trauma System Readiness Tool (TSRT; Conradi & Wilson, 2011), and Screener of Communicative Competence Scale (CCS; Weimann, 1977), and a demographic questionnaire asking participants to provide information regarding their age, gender, and experience with past athletic injuries. All pretests were administered via Qualtrics survey software. Participation in the research study was not required to participate in the workshop. Following the workshop, participants were encouraged to complete the posttest assessments which included all above instruments except the ACES questionnaire as it was considered to be a status variable that likely would not change before and after the workshop.

Following completion of the pretests, participants attended a Six-hour Whole Person Athletic Training workshop. The workshop was held in January 2023, at the University of Montana in the Athletic Training Department and facilitated by Dan Salois, PhD, LCPC and Adrienne Tauses, ABD, LCSW. Part I of the workshop addressed awareness about the significance of historical trauma, the body’s stress response system, and physical injury in
athletes. Part II addressed self-efficacy and comfort in speaking with athletes about emotional distress and included a role-playing portion to support participants’ application of learned skills. Specifically, to address communication competency, measured by the Communicative Competence Scale, and increase self-efficacy in communicating with student athletes about difficult topics, the workshop addressed key communication skills. These skills included components of empathic listening, active listening, and introduction of how to respond with feeling reflections, paraphrasing and probes. Learning the skills assisted with language development for difficult topics and an ability to practice skills with their peers. A detailed description of the workshop can be found in Appendix G.

Following the workshop participants again completed the TSRT, CCS, and PSS-10. They did not retake the ACES as this was considered a status variable and unlikely to change.

**Quantitative Data Analysis**

A series of paired samples dependent *t*-tests were performed to determine if there were statistically significant differences between the TSRT and the CCS assessments from pretest to posttest. A significance level of $p < .05$ was used for all statistical analyses. Spearman’s rho correlation coefficients were performed to assess the relationship between participant ACE scores and responses to the pretest TSRT and CCS. The following assumptions of a *t*-test were calculated and found to be met: 1) The dependent variable(s) were continuous (interval/ratio), 2) Measurements for one observation did not affect measurements for the other observation, 3) The dependent variable(s) were approximately normally distributed, 4) The dependent variable(s) did not contain any outliers.

**Phase 2: Qualitative Case Study**
Participants

Results of the quantitative Phase 1 analysis guided participant selection for Phase II. There were no statistically significant correlations between the participants’ ACE scores and scores on the TSRT and CCS pretests. In reviewing demographic information, ACE scores, and variation between the pre and posttest TSRT, participants were chosen in the following systematic way to attain maximum variation of the sample: 1) two participants with high ACE scores, one with high variation between pre and posttest TSRT, and one with low variation between pre and posttest TSRT. 2) Two participants with low ACE scores and one with high variation between pre and post TSRT and one with low variation. There were no significant changes observed in participant CCS scores, therefore these scores did not contribute to the purposeful selection of participants for Phase 2. After consideration of the aforementioned factors, two male participants were included for variation within the sample. Please see Table 1 for an outline of participants chosen with a more detailed description of each of them to follow.

Table 1

*Participant CCS, TSRT, PSS-10, & ACE score distribution*

<table>
<thead>
<tr>
<th></th>
<th>CCS (Total possible 180)</th>
<th>TSRT (Total possible 54 pts)</th>
<th>PSS-10 (Total possible 40pts)</th>
<th>ACE scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAN</td>
<td>PRE 152 POST 159</td>
<td>PRE 23 POST 45</td>
<td>PRE 3 POST 18</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Anonymous-2</td>
<td>139</td>
<td>149</td>
<td>21 24 6</td>
</tr>
<tr>
<td>Odin</td>
<td>144 143</td>
<td>35 34</td>
<td>28 23</td>
<td>4</td>
</tr>
<tr>
<td>CW</td>
<td>144 145</td>
<td>27 38</td>
<td>26 21</td>
<td>0</td>
</tr>
</tbody>
</table>
Participants were asked to choose a pseudonym to protect their information and their chosen pseudonyms will be used throughout the results. Participant one known as Odin, identifies as a cisgender male. He is 18-24yo and currently holds a bachelor’s degree. Odin identifies his race as Caucasian, grew up in the northwest region of the US and is completing his first year of the Athletic Training Education Program (ATEP). He identified his stress level as “high’ within the program, scored 28/40 on the PSS-10 pretest and denies a history of personal mental health counseling. Odin answered ‘yes’ to having experienced injury, although denies it as being career ending. He ran cross country and played basketball as an athlete. Odin endorsed a score of ‘4’ on the ACES questionnaire, and his pretest scores on the TSRT and CCS were 35/54 and 143/180. His post score on the TSRT was 34 demonstrating a decrease of -1 from pretest to posttest, and 73 on the CCS indicating an increase of 1 from pretest to posttest.

Participant two, Anonymous2, identifies as cisgender male from 25-30yo, currently holds a master’s degree, and identifies as Caucasian race. He reports growing up in the northwest region of the US and is currently in his second year of the ATEP. He identifies “moderate” stress in the program, scored 21/40 on the PSS-10 pretest, and endorsed a history of mental health counseling. Anonymous2 experienced a season-ending injury in his senior year of high school. He played football, basketball, and baseball. He answered “yes” to experiencing chronic injury and currently works with high school students in his clinical practicum. Anonymous2 scored a ‘6’ on the ACES questionnaire. He scored a 19/54 on the TSRT pretest and 39/54 on the post test, accounting for a 20-point increase. He scored 139/180 on the CCS pretest and 149/180 on the posttest.

Participant three, KAN, identifies as a cisgender female aged 25-30, and in her second year of the ATEP. KAN grew up in the northwest region of the US and endorses a personal
history of engagement in mental health counseling. She identifies ‘moderate’ stress level, scoring the program, scored 3/40 on the PSS-10 pretest, and denies experiencing injury herself. She played soccer and tennis historically, and currently works with high school aged athletes. KAN scored ‘0’ on the ACES questionnaire. She scored 23/54 on her TSRT pretest and 45/54 on the post test, accounting for 22-point increase. KAN scored 152/180 on the CCS pretest and 159/180 on the posttest.

Participant four, known as CW, identifies as cisgender female, aged 18-24. She identifies her race as Caucasian and grew up in the southwest region of the US. CW is in her first year of the ATEP and identifies being ‘moderately stressed’ and scored 26/40 on the PSS-10 pretest. She enjoys taking care of herself by spending time with her partner talking and going out with friends. CW denies ever have been in mental health counseling. She has been injured, although not career ending, and engaged in track and field. CW scored ‘0’ on the ACES questionnaire. She scored 27/54 and 38/54 on the TSRT pre and posttests accounting for an 11-point increase. She scored 144/180 on the pretest of the CCS and 145/180 on the posttest.

**Qualitative Research Design**

To better understand what contributed to ATEPs’ trauma awareness and perceptions of competence in communication, all four participants responded to questions generated from the quantitative results. Qualitative results explained and supported results of quantitative analysis, specifically what, in addition to the workshop content, contributed to participant scores on the TSRT and CCS. Individual, in-depth, semi-structured, in-person interviews were audio recorded and conducted using the following protocol:

1. How did the workshop change your awareness of trauma, if at all?
   a. What about trauma for athletes specifically?
2. Has your ability to enter difficult conversations changed with athletes? If so, how? If not, what are the barriers you perceive?

3. How does your own experiences with trauma inform your work?

4. What have you noticed in your work with athletes since attending the training?

5. Have you put into practice anything you learned in the workshop and how?

6. How does the athletic environment you are in support incorporating what you learned in the training? Or, if not what are the barriers?

All interviews were transcribed and coded by hand. Following the interview transcriptions and data analysis, raw interview data were destroyed. The researcher engaged in memoing additional thoughts and interpretations following interviews. The researcher contacted participants for a member check after the final coding process for further determination of reliability of codes identified through Thematic Analysis (TA), which is further discussed below.

**Qualitative Data Analysis Through Case Study Design**

The second research question explored what contributed to ATEPs’ trauma awareness and perception of communicative competency, and guided my decision to use case study design to best answer the research question. According to Creswell and Poth (2018) a case study design is a good approach when the researcher seeks to provide an in-depth understanding of cases or a comparison of cases. I used an explanatory purpose-oriented design as it assisted in identifying causational links (Yin, 2009, as cited in Sheperis, Young, & Daniels, 2017). This approach is most appropriate in describing the why and how of causal relationships (Sheperis, et al., 2017). After analyzing quantitative results, I conducted purposeful sampling and chose within case analysis to describe each of the cases and patterns throughout each of the cases for cross-case analysis. (Yin, 2009, as cited in Creswell & Poth, 2018).
An additional integral piece of case study research is to understand the importance of the contextual information. Case studies tend to focus on a small number of issues or concerns that are important in understanding the entire system perspective (Jones & Lyons, 2004). The overlapping of data collection and analysis provides flexibility for the researcher to adjust if needed to better understand each case in depth. This was illustrated during the data collection process with the researcher asking follow-up questions or including the use of probes and encouragers to gather additional information from the participants to gain a perspective of context and the larger picture surrounding their narrative. Case study research often attempts to build the theory as the data is analyzed. Because theories may bias or limit findings, it is imperative the researcher remain transparent during this process (Cronin, 2014).

Within case study research methodology, the data analysis approach used was Thematic Analysis (TA), developed by Boyatzis (1998) as the best step-by-step approach to identify patterns within and across cases (Boyatzis, 1998; Braun & Clark, 2008). TA provides a flexible and useful research tool enabling the collection of rich, detailed, and complex data (Braun & Clark, 2014). TA is not wedded to any pre-existing theoretical framework, and therefore can be used with different theoretical frameworks or can be data driven making it an obvious choice for case study design (Braun & Clark, 2008; Boyatzis, 1998). According to Boyatzis (1998), the bulk of analysis involves five steps depicted below.

**Figure 4**

*Thematic Analysis Steps*
Below is an overview of each step within my coding process that follows closely within the TA framework (Boyatzis, 1998; Braun & Clark, 2008).

**Reducing Raw Information**

I interviewed each participant after creation of a qualitative protocol ensuring that each participant would be answering the same questions. After interviewing each participant, I made notes, memoing my own experience and observations made during the interview process. I then listened and transcribed the interviews. After initial transcription I re-listened to the narrative, capturing additional observations of the participants’ narrative.
**Identifying Themes within Subsamples**

After familiarizing myself with the data, I began to code interesting features and paraphrases within each participants’ interview. This being a multi-layering system, I did this for each participant creating a list of codes for each individual question and each participant. Codes identified a feature of the data that paraphrased important content, often displayed initially in short sentences within an outline form per participant. It was important in this phase to ensure that all actual data extracts were coded, and then collated together within each code. This created a preliminary set of themes found within each case. This phase also included copying extracts of data from individual transcripts for initial reliability of codes per participant. Themes were collating together using notecards and moving them around for collating and collapsing similar themes into one another.

**Comparing Themes Across Subsamples**

I collected all of the themes that had emerged within each subset and arranged them across a large table to allow emergence of larger themes across the subset themes. All data was coded and collated resulting in a long list of codes identified both within the cases and then across cases. The focus then shifted to analysis at the broader level of themes, considering how different codes were combined to create overarching themes. I created a visual map on the table and wall of all the notecards for ease of moving them around to identify relationships between codes, between themes, and between different levels of themes through overarching themes and sub-themes. The codes that didn’t fit anywhere were moved into a different category temporarily.

**Creation of a Code**

I began to have a sense of significance of overarching themes, although it was important to note that themes could continue to change through refining, discarding, or separating.
I determined if the themes worked in relation to the coded extracts and the entire data set, generating an initial thematic analysis flow chart. I reexamined the list of themes, paying careful attention to themes that did not have enough data to support them and collapsed others into themselves. Ongoing analysis involved refining the specifics of each theme that was identified under the overarching themes found. Defining themes, according to Boyastzis (1998), involves identifying the essence of what a theme is about, themes overall, and determining what aspect of the data each theme captures. I reviewed the raw data and looked at collated data extracts for each theme and organized them in consistent account with the accompanying narrative. For each identified theme, I wrote a detailed narrative for each theme and its subthemes, identified a story that each theme tells, and considered how the theme fits into the broader overall story.

**Determining Reliability of Codes**

After careful determination of overarching themes and subthemes with correlated narrative information from the raw data, I returned to the participants to ensure the themes were an accurate representation of what they were sharing within the interviews. Additional trustworthiness came from my chair reviewing the TA process, identification of themes, and noting any discrepancies in patterns I identified and displayed.

**Writing the Results of TA**

The interpretation of the TA and writing portion involved my own reflective process, the general reporting through short vignettes of the cases and context, rationale for my selection process, and explanation of causal relationships. This is referred to as explanation building analytic technique as it involves comparing patterns through identifying and explaining causal relationships (Yin, 2009). This being a mixed methods research design, the type of analysis best
fits the research questions, and the interpretations were then further integrated with the quantitative results.
CHAPTER 4: Results

Phase 1: Quantitative Analysis

A paired samples t-test was conducted on the data for each of the hypotheses. An alpha level of .05 was used for all statistical tests.

It was hypothesized that ATEPs who completed a Whole Person Athletic Training workshop (n = 13) would demonstrate statistically significant increases in scores on the Trauma System Readiness Tool (Chadwick Trauma Informed Systems Project, 2013) from pretest to posttest. The t-test analysis found a statistically significant difference between the pretest (M = 26.23, SD = 6.70) and posttest (M = 43.00, SD = 6.90) Trauma System Readiness Tool (TSRT) scores, rejecting the null hypothesis: t(12) = -6.51, p < .001, df (n-1).

Hypothesis two stated that ATEPs who completed a Whole Person Athletic Training workshop (n = 13) would demonstrate statistically significant increases in scores on the Screener of Communicative Competence Scale (Weimann, 1977) from pretest to posttest. In contrast to the TSRT, t-test analysis between the pretest (M = 140.94, SD = 11.14), and posttest (M = 141.75, SD = 12.64) of Communication Competence Scale (CCS) scores did not show a significant difference, therefore signifying a failure to reject the null hypothesis; t(12) = .68, p =.51, df (n-1). Please see Table 1 and Figure 5 below for further explanation of t-test analyses, as well as data specific to the ACE survey and the PSS-10.

Table 2

TSRT and CCS scores from pretest to posttest

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Pretest Mean</th>
<th>SD</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSRT (out of possible 54 points)</td>
<td>26.23</td>
<td>6.70</td>
<td>43.00</td>
<td>6.90</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>
Next, a *spearman’s rho* nonparametric correlation coefficient was computed to assess the linear relationship between the ACES score and TSRT pretest and ACES score and CCS Pretest, and the ACES and the PSS-10 pretest. There was not a significant relationship found between ACES and TSRT pretest: $r(11) = .17, p = .58$. There was not a significant relationship found between ACES and CCS pretest: $r(11) = -.07, p = .83$. There was not a significant relationship found between ACES and PSS-10 pretest, $r(11) = .50, p = .09$. There was a positive correlation
between ACES scores and both the TSRT and CCS pretest scores, however neither was found to be statistically significant.

Calculation of the effect size, \( \text{Cohen's } d \) was computed between the pre and posttest means for the TSRT using the following equation: \( \frac{(\text{Mean}_2 - \text{Mean}_1)}{\text{Standard Deviation}} = d \). Cohen’s \( d \) in this case was found to be 2.46 indicating a large effect size, contributing to the validity of the results.

**Phase 2: Qualitative Analysis**

The question guiding the qualitative phase of the research was: What contributed to ATEPs’ trauma awareness and perception of communicative competency? The research question created a foundation to return to as the results from the interviews began to emerge. Presentation of qualitative analysis begins with a depiction of the major emergent themes explained in the methods section as, *Comparing themes across subsamples* and *Establishment of a code* (Figure 4). Themes were identified through a systematic reduction process of the raw data and identified as Overarching Themes, illustrated below, as Figure 6. Figure 7 illustrates the next phases of analysis that include the addition of emergent subthemes following within and cross case analyses.

**Figure 6**

*Qualitative Analysis 1a Overarching Themes*
Figure 7

Qualitative Analysis 1b Overarching Themes with Subthemes
Theme 1: Personal Factors: Mental Health and Communication

The first theme identified, *Personal Factors: Mental health and Communication*, represented what the participants came to the training with. More specifically, *Personal Factors* were defined as status variables that the participants identified that included historical experiences, experiences within their family or origin or household that pertained specifically to mental health or focused on communication. Four subthemes emerged as part of *Personal factors: Mental health*: (1) *family mental health*; (2) *academics*; (3) ‘*get over it*;’ and (4) *vulnerability*. Four subthemes emerged as part of *Personal factors: Communication*: (1) *help seeking*; (2) *trust*; (3) *perspectives*; and (4) *talking about mental health*. Each of the subthemes are further defined as they are introduced below.

The first subtheme, *family mental health* suggests that the group of athletic training students are drawing on their own history as a way to normalize difficult experiences the student athletes may be having. *Family mental health* indicates what participants shared about their upbringing that was indicative of mental health concerns or struggles within their family of origin and/or their household. For example, Odin, reported “my own experiences with trauma growing up in the household . . . it definitely was a struggle . . . I take a lot of those personal experiences and I can relate with my athletes . . . I’m able to develop trust with [student athletes] a lot easier.” KAN shares that their history influenced her “being able to share my story and being able to help others . . . it showed that they are not alone in what is going on.” Furthermore, CW reflects on her own growing up fearing that she may be a burden on others which influenced her focus on multi-tasking when she has a lot of student athletes she is tending to, “maybe that’s when the person walked in to sit and chat with you . . . I’ll come back like I’m not just missing you. It’s not that I’m too busy.”
The second subtheme, *academics*, indicated through participant disclosures about school related personal factors which could be school age up through their current academic status. The subtheme also speaks to the cumulative effect of academic pressure that these athletic training students face. For example, participant KAN said:

I have... had mental health struggles... I mean I had them prior to getting into graduate school... everything just kinda built up when I got into graduate school with the workload... I really just broke down a bit... I knew that I wasn’t myself and I didn’t want it to get worse if I kept going... like being able to share my story and being able to help others, I think it should that they are not alone with what is going on.

The third subtheme, ‘*get over it*’ was noted to be a cultural attitude or sentiment felt among the participants in general about managing mental health struggles. ‘*Get over it*’ is best illustrated by Anonymous 2 in their history of growing up in a region where the attitude of his region was “be tough” which “wasn’t necessarily that simple.” Anonymous 2’s example illustrates that growing up within a household where there are family members struggling with mental health allows him to better “recognize that stuff... and think about ways to open the door easier.” Anonymous 2 acknowledges that mental health struggles among student athletes are easier to recognize and being able to validate that they, too, may be living within an environment where mental health struggles are not spoken about and it may inhibit a student athlete to come forward needing help.

The fourth subtheme, ‘*vulnerability*’ emerged as participants began to share their own experiences with counseling. The term *vulnerability* came out frequently as the participants began speaking about their own mental health struggles or witnessing them creating a way to relate to their student athletes who may be struggling with feelings of vulnerability in sharing a struggle.
KAN reports on her own hesitancy with counseling and the difficulty finding the right fit; “I ended up talking with my doctor back home but they didn’t really listen . . . they kept saying well let’s try this medication, it still didn’t work . . . I ended up getting a doctor here and she’s like way better [at] listening and got me the care I needed.” The subtheme, vulnerability was also addressed in the athletic training students’ awareness of vulnerability in elite athletes sharing their own struggles with mental health. For example, KAN shares, “I look at a lot of the Olympic athletes that have had [mental health struggles] and I look up to them.” Her example speaks to the influence of media and normalizing others’ vulnerability in reporting their struggles as having a trickle-down effect in the way they now interact with the student athletes. Odin, too, speaks to vulnerability in “getting as much information as I can from a [student athlete] . . . because I can get to their level.”

The first subtheme that emerged as part of personal factors relating to communication, was help seeking. Help seeking emerged as a subtheme as participants began to share their experiences of how to communicate their emotional needs. Additionally, noted was the difficulty in asking for help when participants were experiencing emotional struggles. Help seeking was especially salient for CW who shares that rather than asking for help, “I tend to [use] a lot of jokes . . . I’m not trying to be a burden or anything. I hope I can recognize that in the moment . . . I wish that someone would have just sat down [with me] . . . let’s actually chat about this . . . not in passing.” Her example speaks to their history and knowledge of their own struggles in help seeking as a young person for fear of being a burden. Now, they are better able to recognize that in student athletes who may have a similar presentation.

The second subtheme, trust, emerged quickly as the participants talked about wanting to create an atmosphere of trust and safety for student athletes to come to them needing to talk or
share something difficult. Each of the participants discussed identifying the need for a trusting relationship where they could communicate needs albeit difficult to talk about. Odin’s explanation that “I know how to show that it’s an open space where [student athletes] can communicate about anything.” This was further supported by KAN’s report, “better able to put yourself in their shoes and understand where they are coming from.” The participants are directly drawing of their own personal histories of communication of mental health topics as ways to develop trusting relationships with their student athletes.

The third subtheme, perspectives, emerged as participants used their own histories to explain that they had a wider perspective on the needs of the athletes because of their own experiences. Perspectives appeared to allow the ATEPs to take a wider view of what may be happening with their athletes due to their own experiences. The subtheme was best described by Odin, “I can understand all perspectives because I had a multi-dimensional, I guess childhood, growing up from being poor, to being middle class or even having friends that were in the wealthier class . . . just being able to see all perspectives, I think will help me in the future [when talking with student athletes].”

The fourth subtheme, talking about mental health, was further defined and understood as the participants’ ability to normalize their student athletes having struggles and them wanting to be a safe person their athletes could open up about mental health struggles they may be experiencing. Talking about mental health was reflected in the entire subgroup during the interviews that their own personal histories allowed them to assert that it is ‘okay’ to talk about mental health with their athletes. Odin exemplifies this when sharing how his history influences the ways he sees others, “it comes from the people-pleaser aspect of my background . . . seeing somebody in distress just really bothers me on the inside, so then I have to be the guy that has to
go and fix it.” While prior to the workshop many of them endorsed a fear about how to enter the conversations, the entirety of them expressed their own experiences being an influence for openness to talking about mental health struggles in others.

**Theme 2: Trauma Awareness**

The next emergent theme was: *Trauma awareness*, which has been defined as increased awareness that resulted from the Whole Person AT workshop. *Trauma awareness* may encompass a new grasp on educational material addressed within the workshop, clarity about the connection between childhood stressors and injury, and any realizations that arose from attending the workshop. Four subthemes emerged underlying this theme: (1) *deepened understanding*; (2) *injuries impact mental health*; (3) *mind/body connection*; and (4) *educating others*.

The first subtheme, *deepened understanding*, was expressed across the entirety of participants. *Deepened understanding* was a theme that emerged through the participants’ expression of various parts of the workshop that enhanced their understanding of how stress and injury can be connected, how traumatic experiences impact the mind and the body, and specific physiologic symptoms that may occur when student athletes are under increased stress. Each of them endorsed a deeper understanding of trauma following the Whole Person Athletic Training six-hour workshop. For example, while KAN expressed some preliminary knowledge of “the base understanding [of trauma awareness] . . . we touch on it a little but we haven’t touched on it yet . . . and just having the background and how to approach [athletes that are struggling] is what I really learned.” Odin remarks, “it gave me insight on how to help others better understand their trauma and guide them through . . . that process.” Anonymous 2 extends this sentiment with “thinking of how to open the door, and that’s what I pulled from the workshop. . . .” Finally, CW
shared that with an increase in awareness of trauma, she is more attuned to ongoing stressors of their athletes, “more just recognizing that there is increased stress on them this week. . . you said you have three papers this week and there is a ton of workouts, you doing okay?”

The second subtheme, *injuries impact mental health*, was also evident as an integral part of the Whole Person Workshop. This subtheme emerged as the participants began to share knowledge they had gained from the workshop specifically regarding the Stress Injury Model (Williams & Andersen, 1998). Injuries impact mental health was also further defined as the participants discussed psychoeducation that was provided about how mental health struggles can both contribute to injuries through dysfunction in the stress management system, as well as mental health struggles that occur as a result of injuries. KAN spoke specifically about how to talk to student athletes’ struggling with injuries, season-ending or career ending injuries, “we don’t have like a whole class on . . . mental health [or] crisis with athletes, and they have a million things going on . . . and you’re expected to do great in all of them, you know, basically to be superman. . .” CW comments on the connection she notices between student athletes who have experienced head injuries/concussions/TBIs and how it impacts their mental health, “some of the mental health aspects . . . a lot of people with concussions kind of fall into these depressions and have all this weird stuff going on.” Throughout the workshop, participants identified that the illustration and explanation on Williams and Andersen’s (1998) Stress and Injury Model was helpful for them to better understand how historical trauma or environmental stress can impact the stress response system. Their understanding of this concept allowed them to have information to share with coaches and their student athletes to help avoid increased injuries or encouraging play when they are not emotionally stable to do so.
The third subtheme, *mind/body connection*, emerged as a subtheme as the participants described their own experiences after an experiential exercise in the workshop that asks participants to think of a relatively stressful situation and identify where they notice a sensation in their bodies. *Mind/body connection* is best described by CW, “it’s so funny what our mind feels. . . shows up physically because you see [student athletes] come in and they just don’t look the same, right, they don’t look okay, you try to chat with them and get them to open up and they just shut down.” In facilitating an activity during the workshop where participants were asked to think of an event that caused stress in the last two weeks and identify where they noticed the stress in their bodies brought multiple participants identifying “stomach, chest, throat tightness.” During the interviews, CW also spoke to other ways she notices a mind/body connection with student athletes struggling with an injury, “some people who have injuries that they’ve been dealing with season long and they’re just really frustrated. . . sometimes it comes off more like anger towards [athletic training students].” Anonymous 2 exemplifies a mind/body connection that he noticed with an athlete who was struggling with mental health struggles which presented in that athlete through self-injurious behavior: “I saw marks on his wrist and it shouldn’t be left alone.”

The fourth subtheme, *educating others*, emerged as participants began talking about wanting to share with their student athletes how their awareness of historical trauma may influence injury patterns. Educating others is further defined as the participants began to outline salient parts of the workshop that incorporated language about traumatic experiences and injuries which allowed them to feel more comfortable educating their student athletes. For example, Anonymous 2 reports, “we are there every day and we can mostly recognize small things, changes in [student athletes’] moods and report them to the certified athletic trainer or coach at
their site.” KAN also shares, “understand where they are coming from. . . just be there to listen and also guide them . . . sometimes [they] are nervous to talk to the coach . . . it’s being able to like tell them, or talk to them . . . and help them talk to their coach to guide them to the care they need.”

**Theme 3: Conversations**

The third theme that emerged from the interviews was *Conversations*. The theme of *Conversations* represents another integral part of the Whole Person AT workshop. The theme *Conversations* is defined as learning how to speak about difficult topics with athletes. This may include injuries, mental health struggles, interpersonal conflicts and/or daily stressors. There were three subthemes that emerged underlying conversations: (1) sharing of mental health struggles; (2) practice; and, (3) skills.

The first subtheme, *sharing mental health struggles*, began to emerge as the participants discussed the normalization of experiencing mental health struggles that was part of the tone set in the workshop exemplified by validation by practitioners and opening the floor to the participants to speak about their own experiences. *Sharing mental health struggles* was a way to start a conversation, was exemplified by Anonymous 2, “I struggled a lot with mental health and dieting as an athlete . . . I have run into multiple athletes just struggling with diet . . . and I can really get one on one and say I struggled with the same thing. . . what steps I could have done [when I was struggling with mental health] and then I can correspond that to my high school athletes that may be struggling with [the same thing].”

The second subtheme, *practice*, was introduced during the second half of the workshop, which focused mainly on role playing, was expressed among the entire subgroup as being helpful, suggesting that practical application of the skills learned is helpful in the athletic training
students initiating conversations with their student athletes. The primary way this emerged throughout the participant interviews was their attention to the need for more practice to implement the skills learned to increase their efficacy and confidence in speaking about difficult topics with their student athletes. CW shares, “I think I feel more prepared for them . . . because we had those practice things. . . a mini crash course strategy of how to do it . . . was comforting.”

The third subtheme, skills, emerged as the entire subgroup spoke to an increased ability in applying the skills learned on how to create an open space for hard conversations during the Whole Person Athletic Training workshop. Specifically, the workshop outlined four specific basic counseling skills which the participants referred back to as tangible pieces they could apply and noted increased comfort with being able to practice these specific skills with their student athletes. KAN refers to this practice, “without pushing . . . making it more like . . . understanding where they are coming from and just be there to listen and then also guide them. . . they might have multiple things bothering them . . . and being able to talk to them and figure those things out can really help.” Odin follows this with his report, “you know it’s always difficult to start the conversations, but realizing . . . but realizing [now] that if I need to I know how to.” He continues, “I now know how to [start conversations] and how to show that it’s an open space where they can communicate anything.” Anonymous 2 reports on entering a difficult conversation following the skills learned at the Whole Person Athletic Training workshop “it was kinda awkward at first and I didn’t quite know how to approach it, so I kinda started talking in general . . . opening the door. . . I think it went well, [the student athlete] seemed like they understood.” CW speaks the helpful aspect of desiring more practice of skills, “I’m kind of like a hands-on learning. . . when you have to do your first [ankle evaluation] you’re very nervous to do it, but now I have done like a bajillion of them, I feel much more comfortable.”
Theme 4: New Practices

The fourth theme that emerged following the workshop was New Practices the athletic training students are putting into place. New Practices is defined as actions taken by the ATEPs following their participation in the Whole Person AT workshop. The actions may include ways they have incorporated what they learned, sharing information with others, and future ideas of how to best integrate the material into their practices. There were three subthemes that emerged under new practices: (1) resources; (2) future plans; and, (3) guiding conversations with coaches.

The first subtheme, resources, emerged as a subtheme through the participants expressing gratitude for becoming aware of the resources that are available for mental health support. The participants noted that sharing resources with student athletes felt like another way they could increase connection with them by sharing with them additional supportive resources if what the athlete was struggling with was out of their scope. Resources was expressed by participant, Anonymous 2, described a new practice they implemented in their clinical site, “so we put [a poster] up . . . shortly after the workshop of all the numbers and stuff to call in crisis times.” He later shared a story of noticing a student taking a picture of the poster and also noticing “marks on his wrist, and I reported it to [my preceptor] who was able to let the administration know if there was anything we need to do moving forward.” CW speaks to the importance of development of a protocol to have when someone is struggling with a mental health situation, “I’d be curious to see input of if you guys have ever heard of doing a mental health emergency action plan . . . because when you have athletes that [die by] suicide and you go back through, and something along the chain of command or whatever got broken. . . so it’s a training piece on us.”
The second subtheme, *future plans*, began to emerge as the participants talked about how they would like to incorporate what they learned in the workshop in their own future practice. They discussed the benefit of learning and implementing new skills, learning how to talk to their student athletes and being more aware of additional supports as important ways to think about setting their own professional careers up to support mental health care. Participant, Odin, reports, “I’m keeping my eyes out for situations that may arise . . .” and Anonymous 2, “forward thinking like when I’m on my own, I want to make it known that [mental health struggles] is a thing that can be talked about in my room.” CW speaks to the increase in her recognition of mental health struggles, “I don’t know if I would have necessarily dismissed it before but I definitely am paying more attention now.” KAN reports, “I think it’s important to have as [we become athletic trainers] . . . in the facility kind of like check in with [student athletes] . . . you have to be taping . . . but also like checking in with how they are feeling.”

The third subtheme, *conversations with coaches* emerged as the participants began to discuss the importance of sharing salient information with coaches specifically about student athletes that may be struggling. *Conversations with coaches* was further illustrated as the participants shared their increase in confidence in being a liaison between the student athletes by having more specific language about how stress and injury are connected. This subtheme is explained best by KAN, “we’ll try to help them explain themselves to the coach because it’s important for them to be able to talk to them too . . . you can’t push someone into something, they tell the coach one thing . . . but I want to make sure I can [help].” Furthermore, she reports, “every coach is different and so I think that’s a huge stress on athletes . . . being able to tell them or talk to [coaches] and be there to help.”
Theme 5: Cultural Contexts

The fifth theme that emerged from the workshop that undergirds all the preceding themes was cultural contexts, which best describes the contexts of region, family systems, and systemic cultures. The cultural context came to represent the foundation holding the preceding themes and inability for new practices to evolve without the support of the multiple contexts the athletic training students are working in. Under the theme of Cultural Contexts, two subthemes emerged: (1) coaching relationships, and (2) consistency.

The first subtheme, coaching relationships, was consistent among each of the participants in reporting the importance of a supportive relationship with the coaches they are working with for any new practices to be implemented. The entire subgroup spoke to the importance of the relationship they have with the coaches as well as the relationships coaches have with their student athletes. For example, KAN reports “every coach is different, so I think that can be a huge strain on the athletes. . . I think I have been lucky because all the coaches I have worked with have been good. . . good about checking in with their athletic trainer. . . . communicating and checking in I think that’s important . . . not all coaches are like that.” Participant CW speaks to the differences found within coaching across sports, exemplifying one sport that endorses a culture “that there can’t be anything wrong with you, you’re fine all the time. . . you’re fine, suck it up, buttercup.” Her statement is rather provocative here and speaks to the overarching importance of environmental climate tone set by coaches when considering the impact of any intervention.

The second subtheme, consistency, describes the participants’ need for need for consistent mental health support staff. This includes care team members with awareness and knowledge of mental health struggles within their clinical settings. Participants report that
consistent mental health support staff positively impacts the cultural context of the setting. For example, participant CW speaks to the impact of varying consistency of mental health supporters, “I think they just had a really cool network there where they have counselors, and school psychiatrist and . . . and they communicate a lot” as opposed to another setting “we’re so short staffed . . . and everyone’s pitching in everywhere . . . it’s ironic in a way, because it’s like that with the athletes not having a consistent person all the time, there is more stress.” This participant’s experience best exemplifies impact of consistency in support in two different clinical sites. The emergence of this subtheme is also evident through KAN’s explanation that “they aren’t comfortable speaking to you know . . . a lot of others and just being able to have that kind of [consistent] relationship.” She is speaking directly about student athletes not always knowing how a conversation with a coach is going to go and having a consistent supportive person there with an established relationship is important to them feeling comfortable sharing a difficulty.

Odin speaks to the consistent attending to student athlete needs when describing an athletic trainer having autonomy to shift a workout as necessary due to awareness of struggles the student athlete was experiencing: “there was an athlete who has a bit more of a difficult home life. . . she doesn’t like to do the rehab . . . and my preceptor was okay with that because she thinks [it helps] the athlete feel like she was in control of what she could do.” Odin noticed the increased comfort and acceptance this student athlete felt. Modifying her rehabilitation communicated respect from the athletic trainer attending to her needs and provided consistency and presence of support, which contributed to a positive environmental climate.
Theme 6: Class on Mental Health

The sixth theme, class on mental health, emerged out of the entirety of the subgroup reporting the importance of having a class on mental health. Of this theme, there were two subthemes that emerged: (1) mental health procedures; and, (2) practice. Mental health procedures specifically emerged as participants began explaining the importance of their own procedural manuals and protocols that make their jobs easier especially in times of crisis. There is a step-by-step plan of what to do. The participants noted that having specific procedure for a variety of mental health struggles the student athletes may be experiencing would be helpful in accessing appropriate support quickly. According to CW, “one thing that would be kind of cool . . . you create this emergency action plan, like what happens when someone gets a concussion, and these are the steps you are going to follow . . . more of the skills practice of how to handle the situation . . . a mental health emergency action plan . . . because you guys are more experts in that way.” CW is speaking to the varied educational differences that mental health providers may have that could inform practices for athletic training students to use as a step-by-step guide. CW adds “if you are going to do a whole class on concussion, you should have a whole class on mental health.” This is further supported by Anonymous 2 when speaking about coming from the workshop and noticing, “what it really did for me is think about how we can talk about [trauma] if it does come up because it sure did down in my clinical site, like the week after that.”

The second subtheme, practice, emerged as the importance of practicing new skills within a classroom setting as a way for the participants to feel more comfort when it came to dealing with a student athlete struggling. Each of the participants endorsed the need for practicing of procedures, practicing new language that is more mental health focused, practicing what to do in a crisis, and the need to practice specific listening skills to better address mental health needs within their student athletes. Additionally, Anonymous 2 shares a story of
additional agencies that were involved in working with a student athlete struggling with suicidality and “how that process works, communicating with CPS or mandatory reporting, we haven’t talked about it, and . . . I kinda want to get those details down so I know how to put them in to practice.” His example speaks to the importance of addressing the topics in a class where the skills are at the forefront of his mind when in his clinical site.

**Theme 7: Barriers**

The seventh theme, *Barriers*, emerged throughout the participants’ interviews and appeared as impediments to moving towards new practices. There were four subthemes identified within barriers: (1) *sport culture*; (2) *parents of student athletes*; and (3) *self-efficacy*.

The first subtheme, *sport culture*, speaks to the intersection of the regional or environmental culture and athletic culture. Each of the participants noted the *sport culture* as it pertains to implementing new skills. Despite increases in education and practice, the sport culture continues to represent a barrier for implementation of new interventions. For example, this theme emerged throughout the entire subgroup and was exemplified by Anonymous 2’s reports that particular culture in a region of Montana that is considered “be tough and you’re fine . . . especially Montana people I guess kinda just bottle it up.” The culture and attitude of ‘you’re fine’ transcends into the athletic culture, illustrating how mental health struggles also are put aside with the message of ‘be tough.’ CW speaks to the athletic culture, “there are still, it’s different on [another sport] because it’s almost more taboo with them.” She is referring here to student athletes’ barrier in accessing mental health services or even expressing interest in doing so. CW spoke to the difficulty of being an athletic training student in this role if you are working within a culture that considers mental health ‘taboo.’ According to CW:
They create a culture that you know you are there and there can’t be anything wrong with you. . . there are still some places in Montana and places in America that think concussions are nothing, and so, you know anything that has to do with the brain. . . mental health is swooped into that. It’s not as important or as real simply because it’s not a physical thing, you know.

Participant, KAN, adds, “I can’t imagine being a professional athlete, and having media, and everyone kind of like . . . I think that would take a huge toll on them too, just [being able] to come out and saying ‘hey I have mental health struggles too’ . . . because sometimes they don’t have the people that are educated and someone to help them.” She also speaks at the more professional level of the barrier of seeking mental health care within athletics.

The second subtheme, parents, speaks to the barrier of parents as it intersects with culture of environment culture within the family system and how they create barriers to their student athletes as feeling as though they can ask for mental health support. Parents was discussed throughout the participants as a barrier in further supporting student athletes and their mental health care. They illustrated this by explaining experiences of student athletes expressing desire for support and not being able to due to their parents’ beliefs, desires, or expectations.

Anonymous 2 better explains this, “some athletes would go to therapy but they don’t because of their parents, because they didn’t see the point in it.” Participant, Odin reports, “for athletes specifically, you know a lot of athletes . . . have their parents putting immense amounts of pressure on them.” This is further exemplified by Odin’s remark, “if you are supporting [student athletes] going to therapy, for example and the parents are against that, I could see that being a barrier for sure, getting a phone call from an angry parent.” The participants are clearly
illustrating that student athletes’ parents can act as a barrier to how they would like to support their student athletes’ mental and emotional health.

The third subtheme, self-efficacy, emerged as a theme that describes the athletic training students’ feelings of inadequacy when attempting to manage student athletes’ mental health. Self-efficacy implies that participants feel confident in their ability to intervene with student athletes needing mental health support. Participants note a lack of confidence without support of the culture, practice, and overall comfort in their ability to feel autonomous in their role specific to mental healthcare in sports. Anonymous 2 refers back to the case earlier with CPS and watching his certified athletic trainer “trying to communicate with the hospital and the school admin on how best to approach this and like when child protective services my need to be called in because [the student athlete] wasn’t getting the care she needed, so that’s a big one . . . and I’m not clear on this.” CW mentions not having a class on mental health makes it difficult her to feel validated that what she is doing is correct, having someone “like listen and that sort of thing . . . or being given the opportunity or hearing from someone that like, yeah, these are things you are supposed to do. [It would] be comforting to hear that how I would have gone about it was the right way.” Her expression explains the lack of mental health education and application of skills impacts her feeling of self-efficacy in this area of her role. This is further exemplified by CW while speaking about how she assesses her ability to approach a student athlete that she knows may be struggling, “sometimes I hesitate because I’m afraid of making it worse.” Odin speaks to this barrier when attempting to intervene on a negative interaction between two student athletes, “it was kinda awkward at first and I didn’t quite know how to approach it . . . especially when something is serious and you just like all of a sudden the tone has changed.” Participant Odin speaks to feelings of decreased self-efficacy when he experiences lack of trust from the student
athletes. For example, “I think the aspect [student athletes] see it in is the issue of ‘well, this guy doesn’t really know much, he’s just a student . . .’” Odin is referencing the difficulty with young athletes is they often see injury as career-ending and the athletic training students report wanting to ‘describe what is actually happening in their body and what is happening mentally to help them better recover,’ however, the lack of trust from the student impacted his own feeling of efficacy to feel validated to step in.

**Integration of Phase 1 and Phase 2 Results**

The results of the quantitative analysis and the qualitative analysis are synthesized to maintain the integrity of the mixed methods research design. The purpose of this explanatory, sequential, mixed-methods research study was to examine the ATEPs’ awareness of trauma and ability to enter difficult conversations with student athletes. The quantitative research questions addressed in the study are: (1) *How will a whole person athletic training workshop influence the trauma awareness and perceptions of competence in communication among athletic training students?* and, (2) *What contributed to ATEPs’ trauma awareness and perceptions of competence in communication?* There were key findings identified after analyzing the quantitative data and using the qualitative inquiry to better clarify the results. While the Phase 1 results of the quantitative analysis indicated a statistically significant increase found between the TSRT pre and posttests, it was unclear from the quantitative results alone, whether the Whole Person Athletic Training workshop accounted for the change. During Phase 2, the qualitative analysis results illustrated the emergence of themes from participants’ self-reports which better explained the statistical significance found between the TSRT pre and posttest. Notable findings occurred within the integration of Phase 1 and Phase 2 results which explained the participants’ increase in awareness and new practices implemented by the athletic training students after attending the
Whole Person Athletic Training workshop. For example, the participants identified that learning about how childhood traumatic experiences can impact the stress response system from a neurobiological frame was helpful in increasing their awareness of trauma. Additionally, ATEPs acknowledged that learning about Williams and Andersen’s (1998) Stress and Injury Model increased their awareness in different factors that contribute to the stress management system impacts athletes emotionally and physiologically which can contribute to physical injury. Learning some of the physical implications of emotional stress or traumatic experiences was also an indicator of increase in trauma awareness including learning about peripheral narrowing, muscle imbalances, and traumatic response. Additionally, noted here, are the barriers that emerged during the qualitative inquiry and analysis, such as sport culture having a negative view of help-seeking behaviors for athletes, parents not believing in mental health support for their children in sports, and inconsistency in mental health support staff. Without the follow up interviews, I wouldn’t have learned about the barriers that may explain why the scores of the communication competency did not significantly increase.

Research question two, what contributed to ATEPs’ trauma awareness and perceptions of competence in communication assisted in creation of the Phase 2 qualitative inquiry protocol to investigate other factors that may have accounted for the participants’ change in scores before and after the workshop. The ACE scores of the participants were factored in during the purposive sampling. I used two participants with high ACE scores and two with low ACE scores, with differing scores between the pre and posttest TSRT. Phase 2 was helpful to discern the lack of correlation between the ACE scores and the awareness of trauma or communication competency. While the quantitative analysis did not indicate a statistically significant relationship between ACE scores and trauma awareness, salient information was illustrated within Phase 2 qualitative
results that participants’ own mental health history did influence their ability to see mental health struggles in others. The qualitative inquiry allowed a more in-depth look at the potential relationship between ACES and trauma awareness. Personal factors of mental health and communication emerged as themes the athletic training students had prior to the workshop. Those factors had less of an impact on increased awareness or ability to enter hard conversations than I predicted. Phase 2 assisted in explaining why there was not a significant correlation between the ACES scores and TSRT or CCS pretest from Phase 1 analysis. The interviews also helped clarify the need for practice to enter into difficult conversations which was reflected by the lack of a statistically significant increase found in communicative competence. The need for practice further explained the discrepancy found in the qualitative results in which participants reported feeling more comfortable with difficult conversations. However, it was clearly not comfortable enough to increase the relationship to significance. It seems to reason that feeling more comfortable after practicing doesn’t necessarily indicate complete confidence. To the contrary often in learning a new skill, we feel somewhat more comfortable, which often comes with the acknowledgment of realizing how much more there is to know. The participants clearly spoke to gaining some practical applications within the workshop through role-playing and experiential activities, however, it was not enough to raise their ability to statistical significance which was evident when synthesized with the quantitative findings. Developments found from the integration of the quantitative and qualitative analysis have paved the way to think about new practices for athletic training students in promoting interpretive discussion and new practices to consider in athletic training.
CHAPTER 5: Discussion

The following discussion includes my in-depth interpretations of how the qualitative phase of this study expanded on the quantitative findings and contributed to the overall understanding of the effects of the Whole Person AT workshop, and what contributed to changes (or lack of) in measures of trauma awareness and communication competency. Subsections within this chapter address trustworthiness and the role of the researcher as it pertains to the results. There will be a more in-depth interpretation of the both the quantitative and qualitative results and how they relate to the aims of the mixed methods design. Each hypothesis will be examined in more detail and limitations of the study that could have influenced the results will be addressed. Finally, implications for further research will be discussed.

Trustworthiness and Maintenance of Rigor

I engaged closely with each participant’s case (within case analysis), and became familiar with details, known by Cronin (2014) as ‘becoming one with the data’ (p. 9). Boyatzis’ (1998) step-by-step method of Thematic Analysis included the multi-layering process of developing patterns within each case before merging them across cases, to enable data to be viewed in different ways. To maintain rigor, I examined repeated themes and then compared them to similarities or differences found during the coding process of each case. I used multiple sources of evidence marked by specific narration (participant quotes) and subsequent coding themes which achieved construct validity.

Trustworthiness was addressed in two ways. First, following Phase 1 and Phase 2 analyses, both sets of results were integrated to maintain the integrity of both phases and understand how the qualitative results informed the quantitative results. The second way trustworthiness was established was through member-checking – sharing the image of the
emergent themes with the participants of the qualitative portion of this study. They were provided an explanation of the themes that emerged and asked to report back to me if they were misrepresented in any way. Three out of four participants responded, and all who responded agreed that the themes were accurately representing their thoughts and appreciated the ability to learn more about their contributions as participants.

**Role of the researcher as it pertains to results**

Self-awareness is an important part of reflexivity and becomes more ingrained within the data as it is presented. I considered my own biases throughout the research process (Lipson, 1991; Rennie, 2004). The reflexive piece of this research study is relevant and valuable when considering the results of the study and my own lens, biases, and assumptions as I further interpreted the results within the discussion (Morrow, 1992). I can easily see the value in examining my own position.

Memoing throughout all phases of this study was both important and integral when formulating the coding process and the final results. Initially, I made reflexive comments throughout the Whole Person Athletic Training workshop that stood out to me and were incorporated into the discussion section. I also used reflexive memoing after seeing the results of the quantitative analysis as a way to assist with creating a qualitative protocol for Phase 2. Finally, after each of the interviews, I made notes to check my own biases, or my perception based on the answers to the questions. Being a clinician, awareness of my own process and how it comes into the room, is a common and therapeutically necessary skill. I found the same skill to be important in reflecting on what the participants had reported and the lens I was using to further explore and interpret their responses. While I would be remiss not to notice some potential biases impacting my perceptions throughout the study, I think my personal history was
more relevant to my initial interest in the study, rather than influencing the interpretation of the results. My own position as an athlete with historical injury patterns prompted me to learn more about how emotional stress or adverse childhood experiences may contribute to injury in athletes. There is a clearly established link between trauma history and a pattern of athletic injury and recovery. Chapter two outlines a comprehensive literature review in which athletic trainers were found to be key players in intervening with athletes through acknowledging trauma and how it exacerbates the injury pattern. ATs also have potential to shift the stigma around help-seeking behaviors in athletes, as they are often the “safest” people to talk to. ATs, and more specifically ATEPs, are in such close relationship with athletes, they seemed like a natural sample match for my research interest.

This mixed methods research study had two primary aims. The first aim was to measure the effects of the Whole Person Athletic Training workshop on the athletic training students’ awareness of trauma and communicative competency. The secondary aim was to use a qualitative inquiry to explore how students’ past experiences and additional factors may have contributed to the quantitative results. Overall, the results suggest a continued need for ATEPs to have training in psychosocial and communication competencies. Quantitative and qualitative analyses indicated that engagement in a 6-hour Whole Person Athletic Training workshop raised students’ trauma awareness significantly. In contrast, communicative competency results indicated that more communication practice than a one-day workshop is necessary.

Hypothesis One

The results supported hypothesis one which predicted that ATEPs who completed a Whole Person Athletic Training workshop would demonstrate statistically significant increases in scores on the Trauma System Readiness Tool (TSRT; Chadwick Trauma Informed Systems
Project, 2013) from pretest to posttest (see results reflected in Table 2 and Figure 5). To explore this significance, I investigated the possible influence of ACES scores on trauma awareness and communication competency. Although for the pretest I expected to find a correlation between ACES scores and TSRT scores, there was not. This expectation was based on the idea that childhood adverse experiences may influence the ATEPs’ awareness of trauma and how it contributes to injury. The absence of the correlation prompted me to select a variation in participant ACES scores in sampling for semi-structured interviews.

The semi-structured interviews confirmed that ACES scores, at least in this sample, do not appear to be a predictor of trauma awareness. Half of the subgroup had what is considered high ACE scores and half of the subgroup scored ‘0’ on the ACEs. While ACEs scores do not seem to have a predictive relationship with trauma awareness, qualitative interviews suggest that regardless of whether there is specific trauma experienced, our experiences impact the lens we view others through. The results are more suggestive that regardless of trauma history, it is education that can result in changes in trauma awareness. Furthermore, the qualitative results suggested that ACEs, or emotional struggles personally experienced, are helpful in recognizing similar struggles in others.

Results of the qualitative inquiry helped in expanding my understanding of what specifically impacted students’ awareness of trauma. As exemplified by the participants, it was specific education from the Whole Person Athletic Training workshop that enhanced their trauma awareness. The Whole Person AT workshop explained what happens during traumatic experiences in the brain and the body. The students appeared to gain a better understanding of how trauma influences the stress response system and intersects with injury in athletes. Interestingly noted, during the workshop the athletic training students remarked that they had
never seen the illustration or had direct learning about Williams and Andersen’s (1998) Stress and Injury Model. Given that it was a primary part of the learning objectives within the workshop, it suggests to me that this information contributed to their awareness, potentially more so than their own history of ACEs.

The qualitative results also revealed that the participants felt more equipped after the workshop with what to look for in student athletes that may be struggling with mental health issues. This included increased attention to stressors, tracking how their athletes are doing, and feeling more validated to check in on student athletes’ emotional and physical health. The literature previously presented indicated that there is a continued lack of education and practice of how to address mental health struggles with athletes (Neal et al. 2013; Stiller-Ostrowsky & Ostrowsky, 2009). Clearly, the results reflect that a 6-hour workshop increased ATEPs’ awareness of trauma significantly, suggesting that the need for this type of education is high and that athletic training students are engaged in learning and integrating the education into their clinical work.

Previous research findings state that despite NATA's addition of psychosocial competencies, both coaches and ATs continue to have low competency in addressing mental health needs of athletes and implementing appropriate psychosocial strategies (Van Raalte et al. 2015; Cormier and Zizzi 2015). The quantitative and qualitative results of this study suggest that implementation of a trauma awareness training may increase ATEPs’ competency in both of these areas. Results of this study clearly indicated that even if trauma awareness increases, there are additional barriers that ATEPs face with regard to putting their learning into practice.
Hypothesis Two

Hypothesis two stated that ATEPs who completed a Whole Person Athletic Training workshop would demonstrate statistically significant increases in scores on the Screener of Communicative Competence Scale (CCS; Weimann, 1977) from pretest to posttest. This hypothesis was not supported. The mixed methods research design allowed me to gain a better understanding of these results. The outstanding qualitative result that helped explain the scores, was the need for increased practice of entering difficult conversations with student athletes. The workshop included an introduction to four basic fundamental counseling skills; encouragers, feeling reflection, paraphrasing, and probes (exploratory questions). Additionally, there was an introductory lesson on discernment between listening to problem solve and listening to understand. The combined skills were used throughout the afternoon in experiential practice activities where the athletic training students had opportunities to role play the speaker, the listener, and the observer. Each of the participants interviewed mentioned this as an impactful part of the training and that they needed and wanted more practice to feel competent. The results indicate that participants were more able to recognize mental health struggles, however they required more practice to feel competent in engaging in hard conversations. This potentially explains continued lack of communicative competence between the pre and posttest scores on the CCS. The results make sense in terms of a need for practice to gain self-efficacy in certain skills.

Chapter two’s review of the literature introduced studies that indicated that ATs felt less confident in mental skills training techniques. Hamson-Utley (2010) suggested that programs may be underpreparing ATs due to lack of practice or hands-on experience which was consistent with the integrated quantitative and qualitative results of ATEP communicative competency. This lack of preparation could be a result of the athletic training program clinical instructors’
confidence in their instruction of these techniques. The literature poses an interesting question and an implication for further research: perhaps a clinically trained instructor could facilitate psychosocial competency and practical application courses. A future research direction could explore differences in athletic training students’ ability to engage in difficult conversations based on the type of training they receive (and qualifications of the trainer).

Additional findings of the qualitative results addressing both trauma awareness and communicative competency warranted further discussion in understanding the quantitative results. The first is the emergent theme of a Class on Mental Health which was endorsed by the entire subsample of participants. Clearly the athletic training students are aware that their self-efficacy is falling short in psychosocial competency especially around communication. Again, this follows closely with Clement and Arvinen-Barrow’s (2019) findings that ATs inconsistently report competency and comfort in addressing mental health issues. Furthermore, feelings of incompetence may trigger emotional responses that will then influence ATs’ ability to engage in a conversation about mental health issues with athletes and practice psychosocial strategies despite whether or not the strategies were included in their curriculum (Clement & Arvinen-Barrow, 2018; Ostrowski & Ostrowski, 2009; Stiller-Ostrowski & Ostrowski, 2009).

The second key finding from the qualitative inquiry was the emergent theme, Cultural Contexts. Cultural contexts included how mental health struggles are seen within sport culture, including within the coaching relationships as an important factor when thinking about both addressing trauma and engaging in difficult conversations. The participants spoke to the influence of mental health care stigma that remains strong both in terms of geographic region and varying across different sports. They all endorsed a ‘be tough and get over it’ attitude present within family systems and some coaching philosophies that can create a barrier in seeking mental
health care in sport culture. For example, one participant reported difficulty for a student athlete to access mental health care due to their parents not believing in the need for mental health support. If the sport culture is negative towards mental health seeking behavior, it can make it difficult for a student athlete to feel comfortable asking for help, and may create confusion as to who to go to that would be open and receptive to their needing emotional support. In turn, to consider the position of the athletic training student, the same barriers exist that may impede their ability to engage in difficult conversations. There can be increased practice in psychosocial competencies, however, if the setting doesn’t support the intervention, it makes it difficult to envision an athletic training student going against the culture.

Unfortunately, this finding is well supported in the literature that addresses the stigma of mental health care within sports culture. According to Schwenk, (2000) athletes are more likely to reach out for help for a physical injury than a mental health concern, contributing to underdiagnosing mental health concerns and inadequate treatment for athletes. As evidenced in this study, the fear of asking for help is reinforced and contributes to lack of competency in athletic training students to intervene appropriately. Gucciardi et al. (2015) refers to ‘mental toughness’ which was apparent within this research study as a major barrier influencing the ability for athletes to feel as though they can ask for help, and for athletic trainers to feel equipped with addressing mental health concerns. Again, this study’s results indicate that influence of the cultural contexts is one of the primary barriers in looking beyond physical injuries as performance issues only.

Interestingly, the participants spoke about cultural contexts changing across different sports. They all endorsed the idea that football continues to follow the ‘be tough’ attitude, while other sports endorse a positive culture of mental health care. The practices identified include
having counselors on staff, ATs having autonomy for making accommodations for students they
know are struggling with mental health issues at home, and openness to treating their athletes
more holistically by recognizing the importance of external stressors and how they may
influence performance.

The ATEPs’ report that the culture is shifting, albeit in certain sports, allows a unique
opportunity to bridge the gap between sports practitioners and mental health counselors. The
ability to perform this research within a university setting where an advanced degree mental
health counseling department needs internship settings for counselors in training to advance their
clinical skills creates the bridge needed. Simply put, introducing the mental health counselors in
training into the ATEPs’ environment could create relationship building as a foundation for
integrating the two disciplines. Counselors in training are accustomed to educating other
disciplines about their roles and how they can further support the relationships that ATEPs are
building in their work with student athletes. Having the counselors in training available for
clinical support, explaining their role, and building relationships with ATEPs would hopefully
create an advocacy for mental health care in athletics allowing a subtle shift in the culture.

There were key findings as well that addressed the overall purpose of this study.
Originally, the study was proposed to move beyond treatment of injury as performance issues
only, and to introduce the importance of holistic treatment of athletes. Clearly, the continued
stigma of mental health care within sports is going to be an ongoing barrier to moving forward in
holistic treatment of athletes. However, the fact that participants are noticing it changing in
different sports bodes well for a continued positive trajectory. Perhaps as a newer generation of
athletic training students is being educated with increased focus on psychosocial competencies,
there will be a continued positive influence in seeking mental health care for athletes.
A key finding of the qualitative inquiry that speaks directly to the purpose of the study was the emergent theme of New Practices. One of the new practices was the implementation of displayed help-line numbers for mental health resources. This speaks to two important aspects of the new practices. The first being that exposing student athletes to help-lines can be transformative in terms of their own mental health. Additionally, it speaks to the difficulty for those struggling with mental health to tell someone about it and identify what they need or what supports are available.

New practices seem integral for considering what felt salient and absorbable during the workshop. The workshop appeared to influence the subgroup to initiate their own practices within their work as a result. Considering the overall continued stigma in mental health care seeking within sport culture, this theme speaks volumes about a few new practices that could potentially have a huge and lasting impact on student athletes. Beginning to normalize how to ask for help, identify supports available, and having buy-in from the coaching staff may have a significant impact on student athletes’ mental health. Overall, given the implementation of new practices as well as the future directions that the athletic training students are considering, it seems suggestive that while the workshop was helpful, it may be more beneficial to integrate the information and practices with increased frequency such as a class or longer workshop series. This is further supported by the results of Kamphoff et al.’s (2010) study that found that only 50.6% of ATs reported they had taken a course in psychological skills training. Conclusively, there is a clear indication of further research into the efficacy of introducing a comprehensive class for athletic training students on trauma awareness as it relates to stress and injury, and skills training on having difficult conversations with student athletes about mental health.
**Limitations**

There were several limitations to the study that could have contributed to the results. It was important to first address Yin’s (2009) potential threats to internal validity within case study research, specifically explanatory case studies. The first threat considers why the treatment caused a particular outcome; perhaps a third factor that may have been the reason for results. This was addressed with the help of the qualitative inquiry that explored additional factors that may have contributed to both the significant and not significant results of the hypotheses. The second threat is the issue with making inferences about the results and whether all the possibilities of cause for the change have been considered and explained. This threat to validity is more challenging and may have served as a limitation in this study. However, the researcher’s memoing, reflexivity and analysis both following the workshop and within the interviews served to address additional possibilities. Possibilities that could have accounted for the change form pre to posttest included outside education received, differences in clinical experience and practice between first- and second-year athletic training students, and, their own experience with injury which interestingly may not have been addressed thoroughly.

One limitation in this study was the absence of pre-existing literature focused on athletic training students. The available literature was focused on athletic trainers. While this appeared initially to be a limitation, and the current study utilized convenience sampling, it is important to note that the results gleaned from the literature and the results of the current study were aligned. The education workshop was shown to increase ATEPs’ awareness in trauma which was evidenced to be lacking within the athletic training profession. Clearly an implication for future research is generalizability to the larger population of athletic training professionals to gauge whether a brief educational intervention would render similar results.
Another limitation for the study was mortality. Unfortunately, not all athletic training students who attended the workshop also completed the pre and posttest. A potential limitation of the facilitators was deciding what to have in the workshop and how in depth to go on certain topics based on literature findings and our own clinical training. Different facilitators may have chosen to organize the training differently.

The amount of time between the Phase 1 quantitative analysis and the Phase 2 qualitative inquiry may have been a limitation as well. Having too much time between the workshop and the follow up interviews may have resulted in a fading of knowledge gained, or “return to baseline.” This is closely tied to the potential challenge of having the facilitator of the workshop also engage in the interviews. It is challenging to say whether this was a drawback or advantage.

Generalizability or transferability serves as a limitation within this study as well. This was a small sample size of only 13 participants completing the pretest and posttest. It appears as though the subsample was proportionally representative of the overall sample, however, it makes generalizability challenging. Important to note however, that even given the small sample size, the results are very much aligned with the literature findings indicating that trauma awareness for athletic training students can likely be influenced with additional training. Findings from this study included that potential experiences influencing change could be, 1) having a class on mental health, 2) additional education specifically about this subject area, and 3) additional practice with hard conversations. Each of these ideas was well represented even within a small sample size.

Another limitation potentially resulting in not observing significant change in communicative competency scores appears to be not devoting enough practice time within the workshop. A good fortune of engaging the participants in follow up interviews allowed me to
gain important feedback directly from the participants of the workshop. This provides a unique opportunity to potentially address specific needs in future trainings.

Finally, a limitation of this study includes the lack of a control group to measure the results against. The addition of a control group may have increased the ability to measure whether the actual change came from the workshop. However, given the research design of mixed methods this limitation was somewhat accounted for by the follow up interviews representative of the larger sample to better explain and understand the results of the quantitative phase.

In conclusion, it is not a matter of whether mental health concerns are present in sports. To the contrary, this study illuminates the need for ATs working closely with the athletes to be more equipped with skills to address what the student athletes are bringing to them. There is more than enough evidence to support the need for increased attention and care to mental healthcare in sport culture.

**Directions for Future Research**

This study validated the benefits of the workshop and then also identified obstacles to athletic training students implementing new practices supporting mental health in athletes. Together, the findings point to the need for additional research focused in four distinct areas: 1) the role of coaches in de-stigmatization of mental health seeking behaviors in athletes, 2) addressing problematic attitudes of the culture surrounding collegiate and professional athletics, 3) understanding the successes and failures from both athletes and coaches that have experiences with acute mental health crises, and 4) addressing training in suicide prevention.

Multiple literature findings outline the barriers that athletes experience in seeking mental healthcare including the stigma of talking about mental health (Cutler & Dwyer, 2020; Gulliver,
Griffiths, & Christenson, 2012; Moreland et al. 2017; Schwenk 2000). Confirmed by this study these include athletes believing they should not complain about emotional concerns and rather focus on their physical performance. The future research importance lies in the larger picture of understanding how and why the stigma remains. For example, perhaps future research could focus on how coaches reinforce the stigma, and what interventions or education might influence a change in coaching attitudes. Athlete relationships with the coaches who may endorse a ‘suck it up’ attitude is not assisting in shifting the culture and we need research to find out how to change this.

Another research potential lies in a bigger picture understanding of the cultural forces embedded in professional and collegiate athletics and exploring systematic approaches to addressing widespread challenges. This could be accomplished through providing education and training to owners, coaches of elite athletes and parents of athletes to measure how their awareness of mental health may change if attending mental health workshops and training. We need to move beyond educating the people open to the shift and find out ways to reach those reinforcing the stigma. Widespread changes are needed to implement system wide changes and uphold a standard for whole person treatment with all athletes.

A closer look at the lived experiences of athletes, trainers, and coaches that have dealt with mental health crises can inform new ways to approach athletes struggling with mental health concerns. For example, although difficult to approach, a valid research opportunity exists in studying the practitioners and the athletes who have been impacted by suicide within athletics. Because these topics are difficult to talk about, solutions and in-depth conversations surrounding suicide have been widely ignored in sport culture. It would behoove the field of athletics to know more about what coaches and athletic trainers in those positions wish they would have known,
and their own thoughts about how to destigmatize mental health seeking within the athletic culture.

Finally, in conjunction with the above proposed research is an opportunity to intervene with specified suicide training tools for coaching and athletic training students alike. The importance of mental health training is clear, however, we have not specifically addressed the need for language, assessment, and application of suicide prevention training. Again, due to the grave difficulty of saying the words, entering a conversation about suicidality is a difficult task. However, this does not negate the need that exists to further train practitioners with the skills to intervene as needed with their athletes who are struggling with suicidal ideation. The addition of a suicide training into a workshop is integral in addition to content that could be added or updated from the original workshop. For example, clearly the participants were looking for increased practice time with communication skills. In creation of another workshop, likely a 2-day workshop would be more proficient in allowing increased time for educational focus the first day and more time devoted to practice for the second day. Additionally, adding valuable readings for participants to read prior to the workshop could be a nice way to begin educating them on current research findings regarding mental health in sport culture. Introducing information about the stigma of mental health care in sports could prime participants to come in with thoughts of advocacy and how to create a bridge between these two disciplines. An opportunity to add a section of the workshop where counselors in training (if available in the same university setting) could come for a back-and-forth learning and trading of ideas to better integrate mental health practitioners into the ATEPs’ environment. This could begin a foundation of relationship building, educating of how counselors in training may enhance what ATEP’s are doing with their
athletes taking it a step further and beginning to destigmatize the presence and availability of mental health care in sports.

In the counseling profession, we often share with our clients that they may feel ‘worse before you feel better’ so to speak. This speaks to the emotional toll that can occur as someone is beginning to unravel difficult experiences in their lives as they attempt to heal. There is a certain amount of introspection and realizations that may be overwhelming and could impact how that person is functioning in areas of daily functioning. The phenomenon of being worse before you are better essentially focuses on daily functioning, which, in the sports world could be seen through physical performance as it is a major area of daily functioning. This is an interesting place for potential research as well. Athletes who are underperforming due to increased stress or historical trauma may find relief with counseling, and, the opposite is also possible. While it may be difficult to explain this to an athlete entering into counseling, it is important to consider the longer term impact of counseling and mental health support for athletes. The concept of longevity will need to be expertly shared along with consistent monitoring to ensure buy-in from student athletes. There is a possibility that experiencing support and validation for their experiences may have a positive effect on their performance as they begin to feel seen and heard in counseling relationships. Assessment and measurement of performance after beginning counseling will behoove the integration of mental health and sports.

Finally, future research could expand upon the current findings by expanding this study to certified athletic trainers and recruiting a more diverse sample. This study was conducted with athletic training students in their master’s program, therefore, expanding the study to certified athletic trainers would increase generalizability. The literature findings are well aligned with the results of this study which consisted of students, however, replicating the study with ATs, would
provide further external validity. Replicating this study with a more diverse population and potentially in different regions of the United States could illuminate challenges that ATs face specific to sport and region. Given the small sample size of this study in what is considered a rural campus with limited diversity represented in the study, it would be interesting to conduct comparative studies in different regions. The different regions and existence of a more diverse sample would extend generalizability of the results.

**Conclusion**

The previously addressed literature, in addition to the findings of this study indicate that there is a continued need for ATEPs to seek education, training in psychosocial strategies, and develop increased competency engaging in conversations with their athletes about mental health concerns (Cutler & Dwyer, 2020). Further exploring how athletic training students can significantly increase their communication competency is an area of future inquiry. Of particular importance is how ATs, coaches, and other influential figures in sport can reduce the well-documented stigma of mental health care within sports culture. The athletic culture is worth mentioning here; namely the difficulty of help seeking in sport culture. We know that on college campuses the stats are stilting of athletes who are not seeking help. While intervening with ATEPs is a step towards shifting the culture of athletics, ATEPs and ATs are limited in how much power they have to change the system. Change must ultimately come from the top-coaches, and higher athletic leadership. Perhaps it is time to look more at the facts that are being illuminated through elite athletes still being victimized for coming out about their mental health struggles, or the athletes that are taking their own lives. We as a culture continue to stigmatize asking for help within sports. It is a heavy question to ponder: when will enough athletes take their own lives for sports practitioners reinforcing the stigma to consider a paradigm shift and
actively try to reinforce help-seeking? This of course, is tricky, as some sports practitioners are raising the bar and doing just that. And, clearly there is enough history and awareness out there that it continues to be a more and grave issue. The goal is not to eliminate mental health struggles from athletics. The goal is to educate the people working with athletes, and equip them with the skills to address concerns, and the overarching barrier of help-seeking within sport culture. We need to start somewhere. Athletic training students are a great start, and future research can explore how education about mental health concerns and traumatic experiences can change the larger tone of professional sports.
References


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APPENDIX A: Information and Consent Form

**Project Title:** A study to measure effectiveness of a trauma-awareness workshop on athletic trainers’ awareness of trauma and perceptions of competence communicating with athletes about mental health issues

**Principal and Co-Investigators:**
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**Purpose:** The following describes the purpose of this project and outlines your basic rights as a research participant. You are invited to participate in a research study that seeks to understand how our trauma awareness workshop affects your awareness around traumatic experiences and injury in athletes and perceptions of competence communicating with athletes about mental health issues.

**Procedures:** If you choose to participate in this research study, you will participate in a private semi-structured interview with a researcher/counselor who will ask a short series of questions pertaining to your experience in the trauma awareness workshop you attended. We expect that it will take approximately 30 minutes for you to complete your interview.

**Payment:** There will be no monetary compensation for your participation in this study, however, your participation will contribute to the overall body of research on intimate relationship development and maintenance.

**Confidentiality:** Your audio recorded responses and all information that you share will be anonymous and identified by number only. Neither your name nor any identifying information will accompany your interview transcription. Only members of our research team who have signed a confidentiality agreement will have access to your interview. Completed transcriptions will be kept in a locked filing cabinet in the principal investigators’ locked and secure office at the University of Montana. Although your name is required on this consent form, this form will be separated from your completed interview and kept in a separate locked filing cabinet. Audio tapes will be destroyed after transcription of the interview is complete.

**Limits of Confidentiality:** Exceptions to your confidentiality involve situations where we might be obligated by law to share information. For example, if at any point during your participation we learn that you are currently at risk of harming yourself or someone else, we might be required to inform someone or to call emergency responders who may need to perform further assessment.
Risks: We believe that the likely risks associated with your participation are minimal. The content of the questions are related to the course content in the class you’re taking and so it shouldn’t be surprising or disturbing. Nonetheless, there is a slight possibility that you might experience distress as a result of completing the interview. Please skip questions that you find to be too difficult or distressing to answer. If, for whatever reason, you become distressed or desire assistance please let a member of the research team know how you’re feeling so we can assist you in accessing counseling services.

Benefits to you: Aside from this, your participation in this study might not benefit you directly. However, your participation will help researchers better understand awareness of how traumatic experiences contribute to physical injury in athletes and your perception of competence in difficult conversations. Increased knowledge will attempt to assist in the mental health culture of athletics.

Voluntary Participation/Withdrawal: Your participation in this project is entirely voluntary. You may refuse to participate or choose to discontinue your participation at any time without penalty. Thank you for your participation and thank you for helping to advance research at the University of Montana.

Questions: If you have any questions about the research now or during the study contact: Veronica Johnson - 406.243.4205 or Adrienne Tauses 406-296-5195. If you have any questions regarding your rights as a research subject, you may contact the UM Institutional Review Board (IRB) at (406) 243-6672.

Consent Statement: I have read and understood the above statements of my rights as a participant in this project. I understand that my participation is entirely voluntary and that I may refuse to participate or choose to discontinue my participation at any time without penalty.

Willingness to participate in follow-up interviews and will be contacted directly by researcher: Y_____ N_____ 

Participant: ____________________________________________

Please Print Name

Signed: ____________________________________________Date: __________________

A copy of this form will be given to you upon your request.
APPENDIX B: Demographic Questionnaire

1. Gender
   __________________

2. Age
   __18-24
   __25-30
   __30-35
   __>35

3. Education Level
   __Highschool Diploma
   __Some college
   __College Bachelor
   __Master’s

4. Ethnicity
   __Euro-American/Caucasian
   __African American
   __Hispanic/Latino(a)
   __Asian
   __American Indian & Alaska Native
   __Native Hawaiian
   __Biracial
   __Multiracial
   __Other________________

5. Region of upbringing
   __Northwest
   __Northeast
   __Midwest
   __Southwest
   __Southeast
   __Outside of the US

6. Years in the Athletic Training program
   __ First year
   __ Second year

7. How satisfied are you with training program?
   Please Circle On a scale of 1-5
   Very dissatisfied (1), Dissatisfied (2), Neither Satisfied or Dissatisfied (3), Satisfied (4),
   Very satisfied (5)
8. Are there things you would like to be added or changed within your training program?
   Please answer openly

9. Do you describe yourself as an athlete?
   ___Yes
   ___No
   ___Not at this time

10. How do sports play a part in your life currently:
    ___I play on a team recreationally
    ___I am not currently engaged in sports
    ___I play on a competitive team
    ___I am a professional athlete
    ___Sports is in my life through working with athletes
    ___Other________________

11. How would you rate your stress level when working as an athletic trainer?
    ___High stress (more days that not)
    ___Moderate stress (stressed some days, more days I am not)
    ___Low stress (rarely stressed and if so specified incident/situation)
    ___No stress

12. How do you like to take care of yourself when you are feeling stressed?
    ___Meditation
    ___Spending time in nature
    ___Playing an instrument
    ___Spending time with friends
    ___Going to therapy
    ___Physical movement
    ___Family time
    ___Other:________________________

13. Have you ever referred an athlete to mental health counseling?
    ___Yes
    ___No

14. Have you ever engaged in mental health counseling for yourself?
    ___Yes
    ___No

15. If yes, how satisfied were you with your experience?
    Please Circle On a scale of 1-5
    Very dissatisfied (1), Dissatisfied (2), Neither satisfied or dissatisfied (3), satisfied (4), Very satisfied (5)
16. How would you rate the relationship you have with the coaches you work with?
   1____ Not a good working relationship
   2____ Good more often than not
   3____ Neutral/adequate
   4____ Most often it is a good working relationship
   5____ Great working relationship

17. If you answered 1-3: What would you like to see changed?

18. Have you been injured as an athlete?
   ___Yes
   ___No

19. If yes, was it a season ending or play-ending injury?
   ___Yes, please explain____________________________
   ___No, I recovered and began playing again

20. What kind of support did you experience when injured?

21. What sport did/do you play?

22. What sport do you work with currently?

23. What would you consider your greatest strength as an athletic trainer?

24. Have you experienced chronic injury?
APPENDIX C: Adverse Childhood Experience (ACE) Questionnaire

This Questionnaire will be asking you some questions about events that happened during your childhood; specifically, the first 18 years of your life. The information you provide by answering these questions will allow us to better understand problems that may have occurred early in your life and allow us to explore how those problems may be impacting the challenges you are experiencing today. This can be very helpful in the success of your treatment.

While you were growing up, during your first 18 years of life:
1. Did a parent or other adult in the household often:
   Swear at you, insult you, put you down, or humiliate you?
   Or
   Act in a way that made you afraid that you might be physically hurt?
   Yes No If Yes, enter 1 _____

2. Did a parent or other adult in the household often:
   Push, grab, slap, or throw something at you?
   Or
   Ever hit you so hard that you had marks or were injured?
   Yes No If Yes, enter 1 _____

3. Did an adult or person at least 5 years older than you ever:
   Touch or fondle you or have you touch their body in a sexual way?
   Or
   Attempt or actually have oral, anal, or vaginal intercourse with you?
   Yes No If Yes, enter 1 _____

4. Did you often feel that:
   No one in your family loved you or thought you were important or special?
   Or your family didn’t look out for each other, feel close to each other, or support each other?
   Yes No If Yes, enter 1 _____

5. Did you often feel that:
   You didn’t have enough to eat, had to wear dirty clothes, and had no one to protect you?
   Or
   Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
   Yes No If Yes, enter 1 _____

6. Were your parents ever separated or divorced?
   Yes No If Yes, enter 1 _____

7. Were any of your parents or other adult caregivers:
   Often pushed, grabbed, slapped, or had something thrown at them?
   Or
Sometimes or often kicked, bitten, hit with a fist, or hit with something hard?
Or
Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
Yes No If Yes, enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
Yes No If Yes, enter 1 _____

9. Was a household member depressed or mentally ill, or did a household member attempt suicide?
Yes No If Yes, enter 1 _____

10. Did a household member go to prison?
Yes No If Yes, enter 1 _____

ACE SCORE (Total “Yes” Answers): ________

APPENDIX D: Perceived Stress Scale-10 (PSS-10)

For each question choose from the following alternatives:
0 - never 1 - almost never 2 - sometimes 3 - fairly often 4 - very often

1. In the last month, how often have you been upset because of something that happened unexpectedly?

2. In the last month, how often have you felt that you were unable to control the important things in your life?

3. In the last month, how often have you felt nervous and stressed?

4. In the last month, how often have you felt confident about your ability to handle your personal problems?

5. In the last month, how often have you felt that things were going your way?

6. In the last month, how often have you found that you could not cope with all the things that you had to do?

7. In the last month, how often have you been able to control irritations in your life?

8. In the last month, how often have you felt that you were on top of things?

9. In the last month, how often have you been angered because of things that happened that were outside of your control?

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Source: State of New Hampshire Employee Assistance Program.
https://www.das.nh.gov/wellness/docs/percieved%20stress%20scale.pdf
APPENDIX E: Trauma System Readiness Tool

Please indicate how much you agree with the following statements about training and education in your agency:

Strongly Disagree (1), Disagree (2), Disagree Slightly (3), Agree Slightly (4), Agree (5),
Strongly Agree (6)

Prompt 1: I have received recent training and education in:

a. The prevalence of childhood trauma 1 2 3 4 5 6
b. The types of trauma that a child may experience 1 2 3 4 5 6
c. Short-term and long-term effects of trauma 1 2 3 4 5 6
d. How trauma affects the brain and body 1 2 3 4 5 6
e. How trauma affects development and impacts a person differently depending on his/her/their development stage (e.g., infants, preschoolers, latency-aged children, and adolescents) 1 2 3 4 5
f. The externalizing symptoms of trauma (e.g., aggression, rule-breaking, etc.) and the internalizing symptoms (e.g., depression, anxiety, etc.) of trauma 1 2 3 4 5 6
g. Cultural differences in how children and families understand and respond to trauma 1 2 3 4 5 6
h. How trauma triggers/reminders and their impact on someone’s behavior 1 2 3 4 5 6

Prompt 2: Participants have access to a mental health specialist with expertise in childhood trauma and trauma-informed interventions (on staff or available for regular consultation) 1 2 3 4 5 6

Source: June 2013 by the Chadwick Center for Children and Families, Rady Children’s Hospital, San Diego. Trauma System Readiness Tool (TSRT) was developed by the Chadwick Trauma-Informed Systems Project (CTISP) as part of the National Child Traumatic Stress Network.
APPENDIX F: Communicative Competence Scale

Instructions: Complete the following questionnaire/scale with the subject (S) in mind. Write in one of the sets of letters before each numbered question based upon whether you: Strongly agree (SA), Agree (A), are Undecided or Neutral (?), Disagree (D), or Strongly Disagree (SD).
Always keep the subject in mind as you answer.

____ 1. I find it easy to get along with others.
____ 2. I can adapt to changing situations.
____ 3. I treat people as individuals.
____ 4. I interrupt others too much.
____ 5. I am "rewarding" to talk to.
____ 6. I can deal with others effectively.
____ 7. I am a good listener.
____ 8. My personal relations are cold and distant.
____ 9. I am easy to talk to.
____ 10. I won't argue with someone just to prove I am right.
____ 11. My conversation behavior is not ‘smooth’
____ 12. I ignore other people's feelings.
____ 13. I generally know how others feel.
____ 14. I let others know I understand them.
____ 15. I understand other people.
____ 16. I am relaxed and comfortable when speaking.
____ 17. I listen to what people say to me.
____ 18. I like to be close and personal with people.
____ 19. I generally know what type of behavior is appropriate in any given situation.
____ 20. I usually do not make unusual demands on my friends.
____ 21. I am an effective conversationalist.
____ 22. I am supportive of others.
____ 23. I do not mind meeting strangers.
____ 24. I can easily put myself in another person's shoes.
____ 25. I pay attention to the conversation.
____ 26. I am generally relaxed when conversing with a new acquaintance.
____ 27. I am interested in what others have to say.
____ 28. I do not follow the conversation very well.
____ 29. I enjoy social gatherings where I can meet new people.
____ 30. I am a likeable person.
____ 31. I am flexible.
____ 32. I am not afraid to speak with people in authority.
____ 33. People can go to me with their problems.
____ 34. I generally say the right thing at the right time.
____ 35. I like to use my voice and body expressively.
____ 36. I am sensitive to others' needs of the moment.

Note. Items 4, 8, 11, 12, and 28 are reverse-coded before summing the 36 items. For "Partner" version, "S" is replaced by "My partner" and by "my long-standing relationship partner" in the
instructions. For the "Self-Report" version, "S" is replaced by "I" and statements are adjusted for first-person singular.

### APPENDIX G: Workshop Schedule

<table>
<thead>
<tr>
<th>Day 1: 8:30-4:30pm</th>
<th>Topics/Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30-9:00am</td>
<td>Ice Breaker! Introductions</td>
</tr>
<tr>
<td>9:00-9:15am</td>
<td>Agenda, Overview of Syllabus, Competencies addressed and learning objectives, important definitions</td>
</tr>
<tr>
<td>9:15-10:00am</td>
<td>Writing activity, dyadic interaction and full group integration of findings</td>
</tr>
<tr>
<td>10:00am-11:00am</td>
<td>Start education on traumatic response and how it relates to athletic injury. Introduction of Emotional Wellness, positive psychology</td>
</tr>
<tr>
<td>10:30-12:00pm</td>
<td>Stress Injury Model (cont), Biopsychosocial Model, Introduction to assessment through brief literature review</td>
</tr>
<tr>
<td>12:00-12:30pm</td>
<td>Activity on hardest subject’s student athletes bring to AT students and subsequent emotions of AT students</td>
</tr>
<tr>
<td>12:30-1:00pm</td>
<td>Lunch! Encouragement to leave room, take care of selves</td>
</tr>
<tr>
<td>1:00pm-1:30pm</td>
<td>Float back activity with pre brief and debrief modeling of the mind/body connection</td>
</tr>
<tr>
<td>1:30pm-2:00pm</td>
<td>Introduce self-regulation and fundamental/basic counseling skills: Feeling reflection, paraphrase, encouragement, probe (open ended questions)</td>
</tr>
<tr>
<td>2:00pm-3:00pm</td>
<td>Practice fundamental counseling skills in groups of three, addressing difficult conversations and debrief activity.</td>
</tr>
<tr>
<td>3:00pm-3:30pm</td>
<td>Resources, Crisis De-escalation, Day debrief with closing ritual</td>
</tr>
</tbody>
</table>