

CAN A SINGLE, ONE-HOUR PROFESSIONAL DEVELOPMENT TRAINING
INCREASE THE TRAUMA AWARENESS OF TUTORS
AT A DIVISION 1 UNIVERSITY?

by

KIMBERLEIGH S. DANIELS

MARTHA CROWTHER, COMMITTEE CHAIR
ERIC BALTRINIC
HEATHER BRITNELL
GEORGE MUGOYA
MICHAEL SULKOWSKI

A DISSERTATION

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the Department of Educational Studies in Psychology,
Research Methodology, and Counseling
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2022

Copyright Kimberleigh S. Daniels 2022
ALL RIGHTS RESERVED

ABSTRACT

Trauma has profound impacts on the behavioral, cognitive, emotional, physical, and social functioning of individuals (Perry et al., 1995). The Adverse Childhood Experiences (ACEs) study (Felitti et al., 1998) was seminal in identifying the high percentage of individuals with ACEs and was influential in highlighting the need for trauma awareness. Trauma awareness has been implemented in kindergarten-12th grade (K-12) education for over two decades (Thomas et al., 2019).

Despite research suggesting that 58.5% of students in higher education have experienced one or more traumatic events (Im et al., 2020), and a study of NCAA student-athletes (71.7% of participants were D1 athletes) where 64.5% reported at least one ACE (Brown, 2019), there is a dearth of literature on trauma-awareness in higher education. Given the percentage of athletes reporting ACEs, understanding how to efficiently increase trauma awareness among those working with student-athletes would positively impact outcomes for both student-athletes with ACEs and those working with them. A first step to becoming trauma-informed is increasing trauma-awareness by providing effective training to educators.

The Multicultural and Social Justice Counseling Competency (MSJCC) model provides a framework of awareness, knowledge, skills, and action. It is a guiding work for understanding how to support students with backgrounds of trauma within academic-athletics. Trauma-awareness is important in academic-athletic programs in higher education, because it shifts the a view of challenging behaviors and academic challenges as moral or cognitive flaws in the

student to considering biological trauma responses as a possible root of academic and behavioral challenges (Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2009, 2015). This enables faculty/staff to realize how trauma may be impacting students, recognize the symptoms, and use skills to help the student regulate and reengage with learning (Perry & Daniels, 2016; Perry & Szalavitz, 2017; Perry & Winfrey, 2021).

Increasing trauma-awareness in academic-athletic tutors in higher education using professional development training is a gap in the literature. Results indicated that a single, one-hour professional development training can increase overall trauma awareness of academic-athletic tutors at a D1 university.

DEDICATION

This work is dedicated to those who set me on this journey, those who helped me finish it, and those who sacrificed and endured through it. To the students who taught me about “the real world” and how to persist in the face of monumental challenges, thank you and I love you. You are my heroes for reasons very different than why you are already heroes to so many.

Dr. Crowther, Dr. Rubin, Dr. Houston, and Dr. May, you came into my life at an appointed time. You brought joy to a season that felt hopeless. You guided me, taught me, encouraged me, and brought me up for air when I was unable to swim to the surface on my own. You saved me.

To those who endured: Garrin (my husband), Joe, Gabe, BrookelynClaire, and Bethany (my children). A dedication of this manuscript to you would be like gifting someone a curse as it has robbed you of a wife and mother. You have been patient as I have missed entire seasons of your lives. What I dedicate to you is myself: time to support and guide you, attention as you learn the ebb and flow of life, arms empty of computer and articles that I may embrace you. To Garrin, thank you for carrying the load of the life we built. Thank you for carrying me in addition to that load. Thank you for waiting for me so that I have goodness to return to. I look forward to the opportunity to love you well again, pillow talks, watching our children grow, fun adventures, and eventually, rocking chair romance.

To El Roi, I surrender to you myself, my titles, my treasures, and the works of my mind and hands on this day and forever more.

LIST OF ABBREVIATIONS AND SYMBOLS

ADHD	Attention-deficit hyperactivity disorder
ANOVA	Analysis of Variance
d	Cohen's d
df	Degrees of freedom
n	Sample size
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
PFC	Prefrontal cortex
r	Pearson product-moment correlation
SD	Standard deviation
t	Computer value of t test
η^2	Eta squared
χ^2	Chi-square statistic
$<$	Less than
$=$	Equal to

ACKNOWLEDGMENTS

I am grateful for everyone at the University of Alabama who poured into me academically so that I was equipped to take on the arduous dissertation journey. I am most indebted to Dr. Martha Crowther, the chairman of this dissertation for her guidance and instruction academically and for her support for and belief in me as both a person and a researcher. I would also like to thank all of my committee members for their input. Thank you to the University of Alabama's academic-athletic program that opened a very protected door to allow me to do this work. I understand the magnitude of the opportunity and am grateful for your trust in me.

CONTENTS

ABSTRACT	ii
DEDICATION	iv
LIST OF ABBREVIATIONS AND SYMBOLS	v
ACKNOWLEDGMENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
CHAPTER 1 INTRODUCTION	1
CHAPTER 2 LITERATURE REVIEW	3
Trauma and Biopsychosocial Impacts	3
Impact of Trauma in Education	5
Impact in K-12 education.....	5
Impact in higher education.....	8
Impact in collegiate student-athletes.....	9
Becoming Trauma Informed.....	11
Trauma informed vs. trauma aware	11
Trauma Informed Framework.....	13
Multicultural and social justice counseling competencies (MSJCC): Awareness, knowledge, skills, and action	13
Trauma Informed Professional Development in Education.....	14
Academic-athletic settings	17
The Current Study.....	20

CHAPTER 3 METHODS	22
Participant Recruitment	22
Positionality	24
Measures	25
Procedure	27
Training development	27
Training delivery.....	30
Completion time and setting	31
Data Analysis	31
CHAPTER 4 RESULTS	32
Does participating in the TAPDT program improve trauma awareness?	32
What aspects of trauma awareness were affected by participation in the trauma awareness professional development training (TAPDT)?.....	33
Demographic Analyses	38
Normality Testing	38
Homogeneity of Variance	40
One-way ANOVAs.....	40
Sex.....	40
Race.....	41
K-12 Work Experience	41
CHAPTER 5 DISCUSSION.....	43
Can a single, one-hour TAPDT increase the trauma awareness of academic-athletic tutors at a southeastern D1 university?	43
Study Limitations.....	46
How other trainings may have impacted outcomes	47

Implications for Trauma-Awareness in Higher Education	48
Implications for the Field of School Psychology	49
Future Directions	50
REFERENCES	51
APPENDIX A TRAUMA-INFORMED CARE IN ACADEMIC ATHLETICS SURVEY (TIC-AAS)	61
APPENDIX B TRAUMA-INFORMED CARE IN ACADEMIC ATHLETICS SURVEY (TIC-AAS)	64
APPENDIX C IRB APPROVAL LETTER	66

LIST OF TABLES

Table 1. Demographic Characteristics of Participants.....	23
Table 2. Individual Survey Items.....	36
Table 3. Normality Testing for One-way ANOVAs.....	39
Table 4. Homogeneity of Variance Testing for One-way ANOVAs.....	40
Table 5. One-way ANOVAs between Demographic Factors and TAPDT Pre-Test and Score Increases.....	42

LIST OF FIGURES

Figure 1. State-Dependent Functioning (Perry & Winfrey, 2021)	19
Figure 2. State-Reactivity Curve (Perry & Winfrey, 2021).....	20
Figure 3. Overall Pre/Post-test Means	33

CHAPTER 1

INTRODUCTION

Trauma can be acute (e.g., rape, mugging, injury, physical abuse), chronic (e.g., poverty, residential instability, chaos in the home, neglect), or complex (experiencing traumatic events repeatedly or experiencing multiple traumas without the ability to escape) (Center for Health Care Strategies, 2021). According to the American Psychological Association (2020), trauma is the result of a disturbing experience. The result of trauma are overwhelming feelings that are so strong that there may be long-lasting consequences that negatively impact behavior, attitudes, and functioning. This often results in viewing the world as unsafe, unpredictable, and unjust. Awareness of the maladaptive behaviors that may result from trauma have been a research focus in K-12 education (Berger, 2019; Maddox et al., 2022; Porche et al., 2016).

A great deal of literature addresses trauma awareness and trauma training in K-12 education (Berger, 2019; Maddox et al., 2022; McIntyre et al., 2019; Porche et al., 2016). While research on undergraduates with a trauma background is emerging (Concepcion & Nadolski, 2021; Doughty, 2020; Gutierrez & Gutierrez, 2019), there remains a dearth of literature on trauma awareness in higher education. Much of the available literature on trauma-informed approaches in higher education is specific to sexual violence, homelessness, or individuals who have exited the foster system (Concepcion & Nadolski, 2021; Shalka, 2019a; Shalka, 2019b; Stephens, 2020). Conversely, little research has been conducted on increasing trauma-awareness in academic-athletics.

Compared to K-12 schools, higher education worldwide is significantly behind in developing a holistic approach to trauma awareness (Concepcion & Nadolski, 2021; Gutierrez & Gutierrez, 2019; Stephens, 2020). Furthermore, even less is known about trauma awareness in subgroups of higher education who provide supportive services such as faculty, staff, and tutors, especially for students who experience high levels of stress like student-athletes. Thus, a system-wide approach that includes the classroom, athletics, resident life, and other support services could benefit higher education (Concepcion & Nadolski, 2021; Gubi et al., 2019).

School psychologists are trained to serve students with backgrounds of trauma on an individual level and to consult and collaborate with educational systems and the various members of the system (Howard, 1977; Ingraham, 2015; NASP, 2010; Sulkowski, 2012). The diverse abilities of a school psychologists and their understanding of systems positions them to lead the expansion of trauma-informed education practices beyond K-12 education and into higher education. The multi-tiered approach that school psychologists are trained in enable them to not only support students from backgrounds of trauma with their skills, but also to increase faculty and staff's awareness and knowledge of trauma while equipping them with skills to better support their students.

CHAPTER 2

LITERATURE REVIEW

Trauma and Biopsychosocial Impacts

To understand trauma and how to respond to it, a basic understanding of brain development is needed (Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2015). The brain develops from the bottom up from a biological and an evolutionary perspective (Perry & Szalavitz, 2017; Perry et al., 1995; Van der Kolk, 2015). This means that the least complex, the most basic involuntary functions, develop first and the most complex aspects of the brain (i.e., the cerebral cortex) develop last and are responsible for higher-order thinking (Perry & Szalavitz, 2017; Perry et al., 1995; Van der Kolk, 2009, 2015). The four parts of the brain important to understanding how trauma impacts development and neurological organization are the brainstem, the diencephalon, the limbic system, and the cerebral cortex (Perry, 1984; Perry & Szalavitz, 2017; Perry & Winfrey, 2021). The development and organization of these parts are impacted by gene expression and by environmental influences (Van der Kolk, 2015). An example of a positive environmental influence would be a caregiver holding an infant while smiling and cooing at the child. Conversely, an infant being left in their bed to cry is an example of a negative environmental influence. Essentially, a sufficient level of positive environmental input or experience is needed for healthy neural development.

The brainstem is the most basic portion of the brain, and it develops first. The brainstem controls bodily functions most central to human survival like heart rate, breathing, blood

pressure, and body temperature. As the first receptor of neural input from the five senses, this part of the brain works to integrate, process, and respond to external and internal sensory stimuli by monitoring the brain's inner world and the body's environment (Aston et al., 1986; Perry & Ablon, 2019; Singer, 1995). This part of the brain "stores anxiety or arousal states associated with a traumatic event" (Perry, 2005) that warn of danger and queues the body's stress response as a survival mechanism. These motor memories can evoke state and affect memories (Perry, 1999) While the brainstem regulates physiological processes, the diencephalon and the limbic system together manage emotional responses and behavior (Perry & Szalavitz, 2017). This is often called the "emotional brain." The limbic system assigns a sensation to the physiological processes. The cortex is sometimes called the "smart brain." This is associated with abstract thinking, speech, and executive functions (Perry & Szalavitz, 2017).

Just as the brain is developed from the inside out or from the bottom up, the brain receives information in a similar pathway (Perry, 1984; Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2015). The behaviors we see in students can be correlated to the region of the brain that is currently online. As fear increases, the ability to operate in the higher parts of the brain decreases (Perry, 1984; Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2015). When in a calm state, the most cognizant part of the brain, the cortex, is dominant, and individuals are able to think abstractly and creatively (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). In this state, individuals are able to engage with learning. As an individual progresses along the continuum between calm and terror, the control of their functioning moves from the higher parts of the brain toward the lower parts of the brain (Perry, 1984; Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2015). The next state represented in Perry's State-Dependent Functioning model is alert. In this stage, one may

become hypervigilant or avoidant, and thinking becomes more concrete (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). When one moves into a state of alarm, the limbic system is the predominant region of the brain the individual is functioning from (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). In an alarm state, one may freeze or become compliant and emotional (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). The next stop on the continuum is fear. This state of functioning is dominated by the diencephalon and may look like defiance or paralysis and cognitively, the individual becomes reactive (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). The final stop on the continuum is terror. In a state of terror, an individual may fight or faint (Perry & Szalavitz, 2017; Perry & Winfrey, 2021). Cognitively, this is a reflexive state and is dominated by the brainstem (Perry & Szalavitz, 2017; Perry & Winfrey, 2021).

Impact of Trauma in Education

Impact in K-12 education

The recognition of the need for trauma-informed systems in the United States is evidenced by the forty-nine bills for trauma-informed practice introduced to federal legislation between 1973 and 2015 (Purtle & Lewis, 2017). Trauma-informed care implementation specific to K-12 education settings has increased since the Center for Disease Control's (CDC) ACEs study in 1998 (Feletti et al., 1998) and is evidenced by the implementation of trauma-informed approaches by seventeen states at state, local, and school levels (Overstreet & Chafouleas, 2016). While a variety of trauma-informed methods and interventions are used in K-12 education (Roseby & Gascoigne, 2021; Thomas et al., 2019), many schools provide trauma-informed support through Positive Behavior Interventions and Supports (PBIS), a three-tiered approach (Tier 1 – One-on-one support for students; Tier 2 – Small group supports; Tier 3 – universal

support received by all students) that K-12 educators are already familiar with (Wisconsin Department of Public Instruction, 2018; Thomas et al., 2019).

Literature indicates that many K-12 students with trauma backgrounds are never identified, some students who have been identified never begin treatment, and some students who do begin treatment do not complete treatment (Saltzman et al., 2003). Schools are uniquely positioned to screen for, identify, and treat students with trauma, and the PBIS multi-tiered approach lends itself to supporting students who are unidentified, untreated, or who have not completed treatment since it provides support for all students (Beehler et al., 2012; Fitzgerald & Cohen, 2012; Woodbridge et al., 2016).

Rigorous research that demonstrates the impact of trauma-informed care within a multi-component and multi-tiered approach is sparse. A systematic review conducted by Maynard et al. (2018) did not find a single study that met the requirements established for their review. While the lack of empirical evidence of the impact of trauma-informed care within a multi-component and multi-tiered approach is of concern, the recent application of trauma-informed approaches and the financial challenges and complexities associated with such studies may explain the limitations in research (Maynard et al., 2018). Such rigorous research is further forestalled by the lack of a dominant framework, standard, or formally established terms used in promoting, practicing, or researching trauma-informed care in educational settings (Thomas et al., 2019). For example, in a review of the research by Thomas et al. (2019), thirty different interventions were examined within the thirty-three articles that met the inclusion criteria.

In a systematic review that focused on the impact of trauma-informed programs on academic and academic-related functioning specifically, fifteen articles met inclusion criteria (Roseby & Gascoigne, 2021). The criteria for this systematic review were different from the

previously mentioned reviews in that studies had to involve a whole school-level implementation of a trauma-informed program, but results only had to be reported for one portion of the whole school intervention, and studies could measure an academic or academic-related outcome (Roseby & Gascoigne, 2021). The results of the Roseby & Gascoigne (2021) study were reported for the following educational domains: preschool, primary/elementary school, and high school.

At the preschool level, significant impacts were reported as a result of trauma-informed programs on some academic-related outcomes (although not on all academic outcomes) (Roseby & Gascoigne, 2021). There were five studies reflecting the impacts of trauma-informed programs in primary/elementary settings. Four of the five studies reported positive results in the following areas: student well-being, achievement, behavior, engagement, development of relationships, self-awareness, literacy, numeracy, attendance, ability to learn, reduction in traumatic stress symptoms, time spent in the classroom, time on task, reduction in suspension rates, and reduced disciplinary incidents (Roseby & Gascoigne, 2021).

In the studies conducted within the high school domain, all but one of the seven studies reported positive impacts on academic and academic-related domains as a result of the implemented trauma-informed program (Roseby & Gascoigne, 2021). While most of the models utilized within the included studies included a degree of professional development training for teachers, the study found to offer the most benefits was the one that included implicit, ongoing teaching for educators (Roseby & Gascoigne, 2021; Stokes & Turnbull, 2016).

Though the studies on the effects of trauma-informed care in K-12 education are limited, results thus far are promising. Given that most students in the higher education system come from the K-12 education system, one might assume that equal attention would be given to trauma-informed approaches in higher education. Further, one might anticipate that the same

tiered support approach would translate to the higher education setting. However, evidence of such programs being applied in higher education was not found in the review of the literature.

Impact in higher education

Child and Adolescent Mental Health Measurement Initiative CAMHI's analysis of data from the 2016 National Survey of Children's Health (NSCH) collected by the Health Resources & Services Administration indicated that 50% of the U.S. population under the age of eighteen have experienced at least one ACE while more than 20% have experienced two or more ACES (CAMHI, 2017). Many of these children and the population they represent are now college-age.

In a survey of university presidents conducted by the American Council on Education in December of 2020, 68% indicated that student mental health was among their top two concerns (National Academies of Sciences, Engineering, and Medicine et al., 2021). In a recent study, lifetime exposure to one or more traumatic events was reported by 58.5% of students in higher education (Im et al., 2020). Given that the Child and Adolescent Mental Health Measurement Initiative (CAMHI) found that almost 50% of children in the United States under the age of eighteen have experienced at least one ACE and that more than 20% of the thirty-four million children in the study had experienced two or more ACEs (CAMHI, 2017), the numbers reported in higher education are not surprising. Essentially, K-12 students who have experienced ACEs also bring them and their related effects to college.

Building a trauma-aware higher education system begins with appropriate training for those who support students in these environments (Concepcion & Nadolski, 2021; Doughty, 2019; National Academies of Sciences, Engineering, and Medicine et al., 2021). Training that simply provides a definition of trauma is not enough. Faculty and staff need to know how trauma impacts individuals and, specifically, how it impacts students within the complex higher

education environment (athletically, academically, socially, etc.). Faculty and staff also need to know how trauma may manifest within these environments.

Professional development training needs to provide information that ensures safety for students as well as those who work with them. Professional development training should also provide information and accommodations needed to increase the likelihood that the students will be able to re-engage in learning, social activity, or sport after encountering a trigger (or any destabilizing experience) (Perry & Daniels, 2016). In an effort to contribute to the literature, this study will extrapolate from evidence-based findings on trauma research in K-12 settings and apply them to higher education. More specifically, this study will investigate if trauma awareness can be influenced among tutors in academic-athletics at a Division 1(D1) university through a single, one-hour professional development training.

Division one is one of three divisions within the NCAA: Division 1, Division 2, and Division 3. Division I schools tend to be larger and more competitive. For example, in the "Guide for the College-Bound Student-Athlete 2021-2022" produced by the NCAA, D1 schools have a median undergraduate enrollment of 8,960, D2 schools have a median undergraduate enrollment of 2,428, and D3 schools have a median undergraduate enrollment of 1,740 (NCAA, 2021a). According to the NCAA (2021a), one in six students are athletes at a D3 school, one in ten students are athletes at a D2 school, and one in twenty-three students are athletes at a D1 school. Tutors work directly with student-athletes and, thus, may be an important part of trauma-informed practice in higher education.

Impact in collegiate student-athletes

According to a report by the National Federation of State High School Associations, 38.7% of NCAA student-athletes reported at least two ACEs, while 25.1% of NCAA student-

athletes reported at least three ACEs (Massey & Johnson, 2020). In a study of NCAA student-athletes where 71.7% of participants were Division 1 athletes, 64.5% of NCAA student-athletes reported at least one ACE, and 32.4% of NCAA student-athletes reported at least two ACEs, while 17.3% of NCAA student-athletes reported at least three ACEs (Brown, 2019). In the Executive Summary: Demographics Database (2020-2021), the National College Athletic Association (NCAA) reported a total of 184,028 Division I student-athletes (NCAAb, 2021). The institution where this study was conducted reported 340 male athletes and 365 female athletes (EADA, 2022) for a total of 705 student-athletes. Based on the assessment of the empirical literature on the outcomes of ACE studies among NCAA Division I student-athletes, it is likely that a significant portion of the student-athletes at the institution where this study was conducted are negatively affected by ACEs.

In addition to the psychosocial health vulnerabilities linked with ACEs, student-athletes must balance the demands of elite athletic participation and academic achievement (Chow et al., 2021; Comeaux, 2012). The unique experiences that this creates have resulted in researchers identifying student-athletes competing at the collegiate level as a distinct sub-population within higher education (Fletcher et al., 2003) that may be uniquely exposed to stressors such as physical injury (Malinauskas, 2010; Mohammed et al., 2018; Yang et al., 2010), mental health challenges (Chow et al., 2021), and social challenges (Putukian, 2016; Tomalski et al., 2019; Wolanin et al., 2016; Yang et al., 2012). However, research on the association between ACEs and increased negative outcomes for student-athletes is sparse. Results from a study by Roberts et al. (2022) illustrate possible increased risk for athletes with ACEs compared to their peers without ACEs. This study investigated the association of ACEs with poor neuropsychiatric health among former professional football players in the U.S. and found that players with four or

more ACES were 60% more likely to be in the top 25% of concussion symptoms and were 48% more likely to have a positive screen for dementia in comparison to U.S. football players who reported zero ACEs (Roberts et al., 2022).

There is also a possibility of student-athletes experiencing trauma during their tenure as collegiate athletes. Collegiate student-athletes may experience an injury during practice or a game and, as a result, develop PTSD (Aron et al., 2019; Bateman & Morgan, 2017). Witnessing a traumatic event, abusive dynamics within sports teams (Aron et al., 2019), prejudice from faculty (Baucom & Lantz, 2001; Comeaux, 2011; Engstrom et al., 1995), non-student athlete peers (Sailes, 1993), and fans (Sanderson et al., 2020) are other negative experiences that have been documented among intercollegiate athletes that can result in the development PTSD (Aron et al., 2019). Thus, in addition to the athletic strengths they possess, student-athletes may also display unique vulnerabilities. Academic-athletic tutors work with student-athletes individually and in small groups. Academic-athletic tutors arguably spend the most time with student-athletes academically and are the most vital resource available to student-athletes (Figler & Figler, 1984; Meyer, 2005; Pope & Miller, 1999; Thompson, 2008). In order to be successful and effective, research has indicated the importance of proper training (Dvorak, 2004; Maxwell, 2001) and made a call for further research of academic-athletic tutors (Thompson, 2008). Given the amount of time spent with student-athletes and the importance of the role of academic-athletic tutors, they were chosen for this study.

Becoming Trauma Informed

Trauma informed vs. trauma aware

According to the Missouri Model for Trauma-Informed Schools (2019), there are a series of stages an organization must progress through in order to become a trauma-informed

organization. Trauma-awareness is the first stage and involves providing training for staff (Missouri Model for Trauma-informed Schools, 2019) so that they realize, recognize, and respond in a supportive manner to individuals with background of trauma while avoiding retraumatization (SAMHSA, 2014). An organization that is trauma-aware has received training on trauma's prevalence and the immediate and long-term impacts trauma may have physiologically, psychologically, and cognitively and the maladaptive behaviors that may be related to trauma (Healing Attention, 2018). Once an organization is aware of the prevalence of trauma and its impacts and is applying trauma-informed practices, the organization moves into the second stage: Trauma-sensitive (Missouri Model for Trauma-Informed Schools, 2019). The second stage requires that the leadership within the organization evaluate the strengths and weaknesses of the organization in regard to how it responds to and supports individuals with trauma. At this stage, leadership and teams are established to continue work with trauma experts in an effort to move toward stage 3: Trauma-responsive (Missouri Model for Trauma-Informed Schools, 2019). When organizational leadership, stakeholders, and staff work toward the consistent continuation of trauma-informed practices being integrated holistically, including the creation and adoption of trauma-informed policies, it becomes trauma responsive (Missouri Model for Trauma-Informed Schools, 2019).

Trauma-informed is stage 4 on the Missouri Model for Trauma-Informed Schools (2019) continuum and is the most advanced. An organization that is trauma-informed has staff that responds to students and co-workers in ways that are supported by the science of trauma; the organization continues to gather new information that equips them to meet the evolving needs of students; and embedded within every level and policy of the organization are trauma-informed responses (Missouri Department of Elementary and Secondary Education, 2019).

The system-level framework put forth by the Substance Abuse and Mental Health Services Administration (SAMHSA) includes realizing, recognizing, and responding to the impact of trauma while avoiding retraumatization and promoting healing. For the purpose of this study, the operational definition of trauma-awareness includes training on the impact and prevalence of trauma that allows individuals to realize, recognize, and respond to the impacts of trauma within a tutoring session while avoiding re-traumatization. Since this training is provided to a subpopulation within the academic-athletic department and is not a system-wide training, it may move the organization toward trauma-awareness, but is not sufficient to result in the organization becoming trauma-informed.

Trauma Informed Framework

Multicultural and social justice counseling competencies (MSJCC): Awareness, knowledge, skills, and action

Research identified a framework of cultural competency that includes awareness, knowledge, and skills (Carter, 2005; Sue et al., 1992). This framework was expanded to include action so that multicultural awareness and competencies might extend beyond the individual and organizational level to public policy and support from communities at large (Ratts et al., 2016).

Awareness requires an acknowledgement on the part of faculty and staff within higher education that the life experiences students bring with them will impact their college journey (Carter, 2005; Sue, 1998). This awareness includes intersectional identities. Intersectional identities were introduced in the area of gender studies by Crenshaw (McCall, 2005) as a way to address social constructs (race, gender, sexual orientation, economic status, ethnicity, ability status, etc.) that together impact an individual's identity and human experience (Robinson, 1999). The intersectionality of student and athletic identities significantly impacts the experience

and identity of individuals (Fletcher et al., 2003). For some student-athletes, trauma is an additional aspect of their identity. Knowledge requires an increased understanding (Carter, 2005; Sue, 1998;) about what causes trauma and the impact trauma may have on students in various environments within higher education and how trauma may manifest. Inactive intellectual knowledge is not enough, the knowledge of trauma must be applied (Carter, 2005; Sue, 1998) in daily interactions with students and when making decisions on behalf of students at the individual or system level. Skills that need to be developed by faculty and staff within higher education are those that enable them to identify behaviors that may be signs of trauma and to know how to best support students in a way that is both responsive and respectful (Carter, 2005; Sue, 1998). When considered within the framework of awareness, knowledge, and skills, it is apparent that increased trauma awareness among institutions of higher education will require training for faculty and staff (Ivey et al., 2015). Research has shown that professional development on trauma practices among educators increases confidence in the educator's ability support students with backgrounds of trauma and that the likelihood of positive behavioral and academic outcomes is increased for those students (Gallagher, 2014; Jones, 2013).

Trauma Informed Professional Development in Education

A common theme in trauma-informed literature is the importance of disseminating knowledge that leads to teachers being able to (1) realize that the impact of trauma is widespread, (2) recognize the symptoms and signs of trauma, (3) respond to trauma responses, and (4) resist re-traumatization (Kataoka et al., 2018; Kinburgh et al., 2005; Morton & Berardim 2018; Overstreet & Chafouleas, 2016; Perry & Daniels, 2016; SAMHSA, 2014). A first step to becoming trauma-informed is increasing trauma-awareness by providing effective professional development training to educators.

A synthesis of the relevant literature found that teachers who participate in effective professional development training courses may demonstrate change in the areas of knowledge, beliefs, and practice (Cimer et al., 2010; Sahin & Yildirim, 2016; Sokel, 2019). The current study will consider the ability of a one-hour trauma awareness professional development training to increase trauma awareness. The evaluation of a change in practice as a result of the provided professional development training is beyond the scope of this study.

Effective professional development training makes sure each participant walks away with an increase in awareness, knowledge, and/or understanding of the subject matter being delivered. Coherence, active participation, and collaborative work were reoccurring themes identified in the relevant literature on the effectiveness of professional development for teachers (Sokel, 2019). Because coherence (also referred to as alignment, compliment, connection, or fit) is conceptualized differently in different studies (Lindvall & Ryve, 2019), literature was examined that highlighted coherence within professional development training and between professional development training and other factors.

Desimone (2009) emphasized the importance of coherence between professional development training content and national, local, and school policy. Other studies identified the imperative nature of coherence between professional development training content and authentic experiences within the education setting (Bayar, 2014; Sahin & Yildirim, 2016). In a study by Sokel (2019), teachers indicated that content that supported them in their current context was a primary priority for effective professional development training. Coherence between the professional development training and materials/content taught by teachers was also identified as a key element of effective professional development (Desimone & Garet, 2015). Other studies highlighted the necessity of coherence within the professional development training itself.

Clearly connecting theory and practical content (Posnanski, 2002) in a way where information and activities build on one another (Garet et al., 2001) was also identified as an important aspect of coherence.

Another key element of effective professional development courses identified in the literature is active participation (Bayar, 2014; Sokel, 2019). Learning-by-doing is supported by current learning theory and is important for adult learners as well (Cimer et al., 2010; Sokel, 2019). Garet et al. (2001) noted that coherence between the information being delivered and the learning environment the teachers work in increases the likelihood of active participation.

A third key element of effective professional development courses identified in the literature is collaborative work (Sokel, 2019). Guskey (2003) noted that the opportunity for attendees to reflect and share ideas and strategies collaboratively in addition to problem-solving together (Garet et al., 2001) increases professional development training success.

Research indicates that professional development training can increase knowledge, understanding, and use of trauma-informed practices in clinical settings (Brown et al., 2012; Green et al., 2015). It can also increase favorable attitudes toward professional development training in childcare settings (Brown et al., 2012).

In a study specific to professional development training for trauma-informed approaches in K-12 schools utilizing a pre-test and post-test to measure knowledge growth, results indicated significant knowledge growth (McIntyre et al., 2019). The results of the study indicated that coherence between school policy and the professional development training content knowledge growth and acceptability were associated (McIntyre et al., 2019).

No research was found on the effectiveness of professional development training among tutors in the K-12 or higher education environments. As such, findings on effective professional

development training for teachers in the K-12 environment were applied to the professional development training designed for the academic-athletic tutors in this study.

As academic-athletic tutors provide educational support, it is probable that the qualities that mark a successful professional development training for teachers will also be important for a successful professional development training for academic-athletic tutors.

The professional development training created for this study was coherent with policies established by the NCAA and the institution of higher education where the study was conducted. The professional development training was also designed to support academic-athletic tutors in their current context.

Academic-athletic settings

While academic-athletic tutors are different than teachers in K-12, their roles are similar in that they enhance learning of learners/athletes. Academic-athletic tutors engage students across multiple domains of academic and psychosocial functioning, which overlap and intersect. Academic-athletic tutors are in a favorable position to provide Tier I support to students impacted by trauma. Positive behavioral interventions and support (PBIS) is a behavioral framework that consists of multiple tiers used in K-12 education that research has been linked to improved academic and behavioral outcomes of students (James et al., 2019). Tier 1 support is the provision of support to every member of the student body (James et al., 2019). Within the context of academic-athletic programs, tier 1 support would be available to every student-athlete. Many higher education institutions employ tutors for NCAA athletes. These tutors meet with students in groups and individually. Some student-athletes have a required number of hours that must be spent in study hall while other student-athletes are assigned multiple tutoring sessions with specific tutors. It is not uncommon for a tutor to spend many hours with an individual

student-athlete over the course of a week. Given the diversity within the student-athlete population and the percentage of NCAA DI student-athletes that reported one or more ACEs, many tutors will work with student-athletes from trauma backgrounds.

The tutors who participated in this training did not have access to the backgrounds of their students and likely did not know if their students had a history of trauma. This lack of personal background knowledge increases the necessity of all tutors working with student-athletes to possess the awareness, knowledge, and skills related to supporting individuals with trauma backgrounds. It is important that tutors understand that trauma has physiological, psychological, and neurological effects on their students that may impact emotional/behavioral regulation in such a way that a tutoring session is impacted. For this training, Perry's (Perry & Szalavitz, 2017; Perry & Winfrey, 2021) state-dependent functioning and state-reactivity curve are used to conceptualize what students with backgrounds of trauma are experiencing. Perry's (Perry & Szalavitz, 2017; Perry & Winfrey, 2021) state-dependent functioning and state-reactivity curve are represented in the tables below.

Figure 6

STATE-DEPENDENT FUNCTIONING

“STATE”	CALM	ALERT	ALARM	FEAR	TERROR
DOMINANT BRAIN AREAS	Cortex (DMN)	Cortex (Limbic)	Limbic (Diencephalon)	Diencephalon (Brainstem)	Brainstem
ADAPTIVE “Option” Arousal	Reflect (create)	Flock (hypervigilance)	Freeze (resistance)	Flight (defiance)	Fight
ADAPTIVE “Option” Dissociation	Reflect (daydream)	Avoid	Comply	Dissociate (paralysis/catatonia)	Faint (collapse)
COGNITION	Abstract (creative)	Concrete (routine)	Emotional	Reactive	Reflexive
FUNCTIONAL IQ	120–100	110–90	100–80	90–70	80–60

Figure 1. *State-Dependent Functioning (Perry & Winfrey, 2021)*

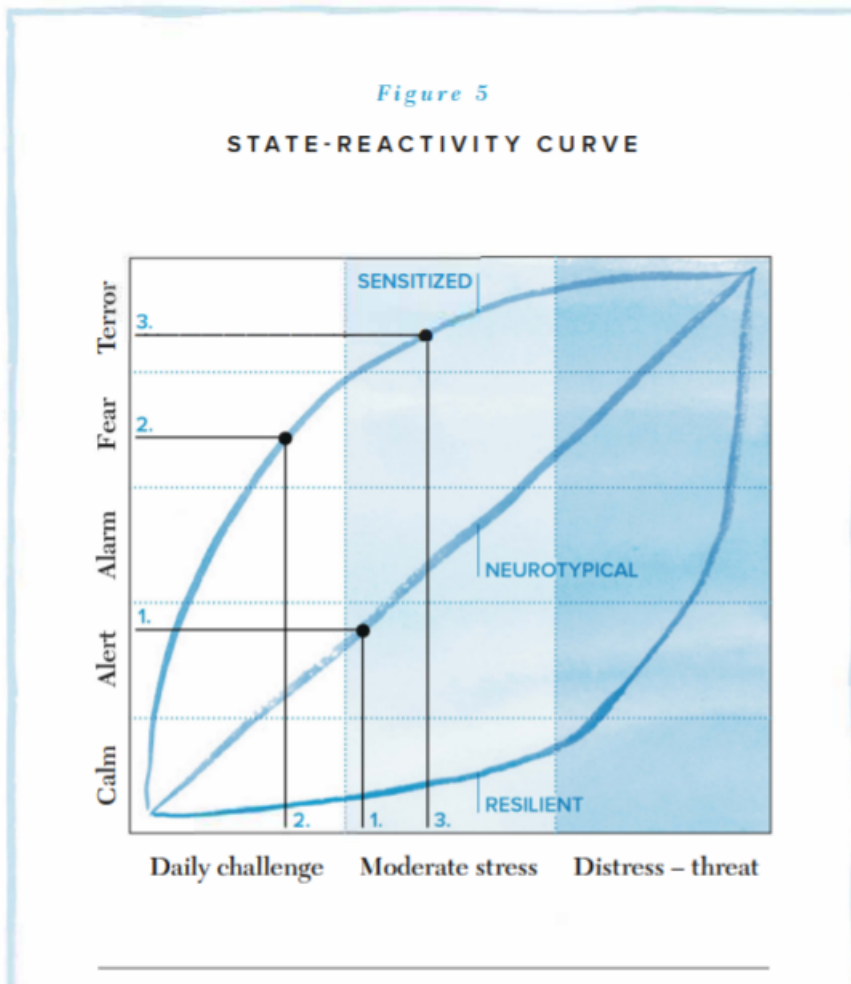


Figure 2. *State-Reactivity Curve* (Perry & Winfrey, 2021)

The Current Study

This study will explore whether a single, one-hour professional development training can increase trauma awareness. This study aims to fill a paucity of research on how to effectively increase trauma awareness in higher education. Specifically, this study will provide professional development to academic-athletic tutors.

A professional development training was developed to meet the following objectives:

- Define trauma and adverse childhood experiences (ACEs).
- Explain the physiological, psychological, psychosocial, and academic impacts of trauma.
- Share ways trauma may manifest in a tutor session.
- Provide tools to help tutors re-engage the learning brain of their students by regulating, relating, and reasoning.

It is anticipated that this professional development training will go beyond defining trauma and increase awareness of trauma's impact while also enabling tutors to identify trauma responses and equipping them to support students. Research indicates that educational outcomes are increased in trauma-informed K-12 education institutions (Herrenkohl et al., 2019). Increased trauma awareness and support for students with backgrounds of trauma can lead to a decrease in risk-behaviors and unwanted behaviors while increasing grade point averages and academic accomplishments (Karatekin, 2017). Raising trauma awareness among tutors allows tutoring sessions to remain safe so that students are not retraumatized. Moreover, it also ensures that time for academic support is not lost.

The primary question of this study is whether a single, one-hour professional development training can increase the trauma awareness of academic-athletic tutors at a D1 university. Specific research questions are as follows:

1. Does the Trauma Awareness Professional Development Training program improve trauma awareness in D1 university academic-athletic tutors?
2. What aspects of trauma awareness were affected by participation in the trauma awareness professional development training (TAPDT)?

CHAPTER 3

METHODS

This exploratory study seeks to increase trauma awareness in D1 university academic-athletic tutors through a trauma-awareness training that was a part of a larger professional development training provided by the academic-athletic department. In doing so, this study addresses key gaps in the field of school psychology in its provision of an empirical study of trauma awareness in higher education. Towards this aim, the current study delivers a 60-minute trauma awareness program to a cohort of academic-athletic tutors at a large, southeastern D1 university. A pre-post study design was used to examine the impact of the training program on participating tutors' trauma awareness.

Participant Recruitment

Participants were recruited from a large, D1 university in the southeastern region. At the time of the study, the university had one hundred and seventy academic-athletic tutors employed by the Academic-Athletic Department. All 170 academic-athletic tutors were given the survey as part of their professional development training. Of the 170 academic-athletic tutors given the survey, Eighty-five of those participants provided consent for their data to be used in this study. The academic-tutor position is a temporary, seasonal, part-time position requiring that tutors are re-hired on a semester basis. Table 1 provides demographic information for the overall sample.

Table 1. *Demographic Characteristics of Participants*

Demographic Characteristics	<i>n</i>	%
Sex		
Male	31	36.5
Female	52	61.2
Non-binary	1	1.2
Not Reported	1	1.2
Race		
Black	7	8.2
White	68	80
Asian	3	3.5
Hispanic	1	1.2
Biracial	5	5.9
Not Reported	1	1.2
K-12 Work Experience		
Yes	63	74.1
No	22	25.9
Previous Trauma Training		
Yes	30	35.3
No	55	64.7

Note: N = 85. Participants were on average 28.77 years old (SD = 13.8).

To recruit participants, the researcher left a flyer in all tutoring rooms at the institution's Academic Center letting tutors know that an opportunity to participate in research would be available during training. The flyer also included the researcher's name, phone number, and room number at the Academic Center should tutors have any questions. When tutors signed into Blackboard to begin their tutor training, they completed a consent form with the description of the study. While all of the institution's academic-athletic tutors were required to attend the professional development training, anonymous data was shared only for those who provided consent. To be eligible for the study, individuals had to be academic-athletic tutors who were 18 years of age or older at the institution where the study was conducted. Anyone below the age of eighteen was ineligible to participate.

One hundred-seventy tutors were eligible to participate in the study. Of the one hundred-seventy eligible tutors, eighty-five gave consent for their data to be used in the study.

Independent of study participation, the institution where the study was conducted paid tutors their typical hourly payment while they participated in the training and contributed data.

Positionality

The researcher was employed by the institution's Academic-Athletics Department from August 2017 to August 2022. However, the researcher was a peer of the tutors who were asked to participate in the research. Therefore, the researcher was a tutor and not employed in a position that could create a power differential. Participants in the study were temporary, seasonal employees in the institution's Academic-Athletics Department. The hiring process of tutors for the 2022 Spring semester began in October 2021 and continued through December 2021. Tutor training took place between December 2021 and January 2022. Training included topics such as

NCAA Compliance, staff expectations, tutoring types and practices, Title IX Compliance, and TeamWorks software training.

Measures

To assess if the Trauma-Awareness Professional Development Training (TAPDT) impacted the trauma awareness of academic-athletic tutors, participants completed a modified version of the Trauma Informed Care in Community College Survey (TIC-CCS; Doughty, 2020). The TIC-CCS was developed to “evaluate nursing and criminal justice faculty’s...knowledge of TIC [trauma informed care] and TIES [trauma informed education strategies], as well as the ability to support students” (Doughty, 2020, p. 67). This scale was developed by Doughty (2020) as no other valid surveys had been developed to measure the aims of the study. Participants provided ratings on thirteen Likert-scale questions to self-report their awareness of trauma. The survey included questions that assessed awareness such as, “I recognize sexual abuse as a form of trauma.” It also included questions that evaluated knowledge such as, “I am knowledgeable about the effects of trauma on learning.” Finally, the survey assessed confidence in skill: “I am comfortable in my ability to support students who have experienced or are experiencing trauma.” Participants utilized a Likert scale of one through five where 1 = strongly disagree and 5 = strongly agree. Doughty (2020) utilized content experts to determine if the intended content area was represented by the items on the survey as suggested by Mills and Gay (2016). Doughty (2020) had faculty from several campuses other than where the study was conducted to pilot the survey.

Cronbach alpha test is suggested to test internal reliability (Bryman, 2012). The Cronbach alpha test considers the possible split-half reliability coefficients and calculates the average (Bryman, 2012). In a range where 1 = indicates perfect internal reliability and 0 = an absence of

internal reliability, 0.80 is the heuristic most often used as the acceptable level of internal reliability (Bryman, 2012). The Cronbach's alpha test yielded a .899 for the pre-test and a .960 for the post-test (Doughty, 2020).

The TIC-CCS was modified to fit the current study – specifically to assess trauma awareness in an academic-athletic program within higher education. The modified survey is titled Trauma Informed Care in Academic Athletics Survey (TIC-AAS) (see Appendix A and Appendix B). To assess level of trauma awareness, participants in the current study completed the TIC-AAS. The survey questions were included on the pre & post-test. As on the TIC-CCS, questions assessed awareness (“I am familiar with the term trauma-informed care.”), knowledge (“I am knowledgeable about the effects of trauma on student behaviors.”), and skills (“I am comfortable in my ability to support students who have experienced or are experiencing trauma.”). Participants were given a Likert scale of one through five where 1 = strongly disagree and 5 = strongly agree. Altogether, participants answered thirty questions.

The survey was modified for the academic-athletic population in the current study (see Appendix A and Appendix B). Specific modifications include:

- The title of the survey was changed from “Trauma-Informed Care in a Community College Survey” to “Trauma-Informed Care in Academic-Athletics Survey”
- The section at the beginning of the original survey requesting participants to select nursing faculty or criminal justice faculty was deleted.
- Question 1 at the end of the original survey, “What is the most interesting/relevant thing you learned in this workshop?” that was used for the qualitative portion of the original study was deleted.

- Question 2 at the end of the original survey, “Describe one way you will apply trauma-informed care in your teaching in the upcoming semester.” which was used for the qualitative portion of the original study was deleted.

The Cronbach alpha test was used to test internal reliability (Bryman, 2012). The Cronbach alpha test considers the possible split-half reliability coefficients and calculates the average (Bryman, 2012). In a range where 1 = indicates perfect internal reliability and 0 = an absence of internal reliability, 0.80 is the heuristic most often used as the acceptable level of internal reliability (Bryman, 2012). Cronbach’s alpha test demonstrated a high level of internal consistency ($\alpha = .894$) for the pre-test and a high level of internal consistency ($\alpha = .933$) for the post-test on the TIC-AAS used for this study,

Overall, this measure was used to collect data on participants’ awareness and knowledge of trauma (5 items), its effects (5 items), and participants’ confidence in their skill to support students with backgrounds of trauma and avoid retraumatization (2 items).

Procedure

Training development

Academic-athletic tutors participate in training on various topics at the beginning of every semester (e.g., NCAA Compliance, staff expectations, tutoring types and practices, Title IX Compliance, and TeamWorks software training.). For this study, a video training on trauma was created in light of the recurring themes of effective professional development for teachers identified in the literature: coherence (Bayar, 2014; Desimone, 2009; Garet et al., 2001; Lindvall & Ryve, 2019; Posnanski, 2002; Sahin & Yildirim, 2016; Sokel, 2019), active participation (Bayar, 2014; Cimer et al., 2010; Garet et al., 2001; Sokel, 2019), and collaborative work (Garet et al., 2001; Guskey, 2003; Sokel, 2019).

The training was modeled on the research of Dr. Bruce Perry (Perry, 1994; Perry et al., 1995; Perry & Szalavitz, 2017; Perry & Winfrey, 2021) and Dr. Bessel Van der Kolk (Van der Kolk, 2009; Van der Kolk, 2015) who emphasize the importance of understanding the role of the brain in supporting individuals with trauma backgrounds. The training addressed both single event traumas, such as rape, car accidents, and burglary, and trauma due to persistent stressors, such as poverty, ongoing abuse, as well as racial trauma.

The training explained the impact of trauma on the brain and the various states represented in Perry's State-Dependent Functioning model (Perry & Winfrey, 2021). The training gave examples of behaviors that may manifest in each state and what that might look like in a tutoring session. Using information from the work of Van der Kolk and Perry, the training explained the importance of responding to students in various states in ways that engage the brain from the bottom up and gives examples of what this might look like within a tutoring session.

The academic-athletic program where this study was conducted provides individual mental health supports through the behavioral medicine director. This would be an example of Tier III support (one-to-one support). Professional development training provided in this study is a move toward Tier I support (universal support).

Coherence (also referred to as alignment), active participation, and collaborative work are reoccurring themes in the relevant literature on the effectiveness of professional development for teachers (Bayar, 2014; Desimone, 2009; Desimone & Garet, 2015; Garet et al., 2001; Guskey, 2003; Sahin & Yildirim, 2016; Sokel, 2019). The TAPDT for this study was designed according to these three elements.

The first element identified in the literature is coherence (Bayar, 2014; Desimone, 2009; Sokel, 2019; Desimone & Garet, 2015; Garet et al., 2001). The current study provides professional development training that is in alignment with national policy as provided by the NCAA and policy put forth by the educational institution where the professional development training was conducted in order to assure coherence between the professional development training and national and school policy.

The professional development training created for this study included information and examples of practical application within a tutoring session in order to provide coherence between the professional development training and tutors' experiences within tutoring sessions. The tutors who participated in this study teach a plethora of varying material. As such, the professional development training provided to participants of the current study did not align with the content/material each tutor tutors.

When developing the professional development training provided for the current study, an effort was made to clearly link theory to practical content in a way that would allow for another key element of effective professional development to imbedded within the TAPDT: participation (Bayar, 2014; Cimer et al., 2010; Sokel, 2019; Garet et al., 2001). Due to COVID-19 protocols still in place to minimize the potential for an outbreak within the athletic department, training was delivered via Blackboard asynchronously. This limited the ability to include interactive activities that build on one another. Thus, there was no opportunity for participants to collaborate and activity was limited to reflective questions throughout the professional development training.

The final key element of an effective professional development identified in the literature is collaborative work (Guskey, 2003; Garet et al., 2001; Sokel, 2019). Due to the time limitation

and asynchronous delivery of the TAPDT, collaborative work was not possible. Future research would benefit from modifying the TAPDT so that it included all three elements of effective professional development.

This study was approved through a university institutional review board and leadership within the academic-athletic program.

Training delivery

The training was provided as an instructional video on Blackboard Learn (Blackboard, n.d.). Blackboard Learn is a web-based application for online learning that can be used to support in-class learning, online learning, or hybrid learning. Before beginning the training, a pre-test was provided to gather demographic information and information about each tutor's trauma awareness (See Appendix A). There was a post-test that re-evaluated each tutor's trauma awareness following the professional development training (See Appendix B).

Tutors were hired by the institution's academic-athletic team per usual practice. The trauma-awareness professional development training (TAPDT) was included in the typical beginning of the semester, mandatory tutor training. Participants engaged in the trauma awareness training via video provided in the academic-athletic training module on Blackboard. Prior to accessing the training, tutors were provided a consent form giving them the opportunity to opt-out of their anonymous, de-identified data being used for research. As part of the training, participants were asked to complete a pre-test. After submitting their pre-test, they received trauma awareness training. Once the trauma training was completed, they were directed to the post-test. The data of tutors who did not consent to participate in the study was not collected for the purpose of this study. While the training was required of all tutors by academic-athletics, participants could refuse to consent to their data being used in this study without penalty.

Completion time and setting

The probable duration of the entire study including data analysis was twelve months. The estimated time for each participant's involvement was 1.5-2 hours. The consent was estimated to take 5-10 minutes. Altogether, it was estimated to take 1.5-2 hours of the participants' time. The pre-tests and post-tests were collected immediately. Participants accessed the trauma training via Blackboard. Since this was a virtual training, tutors could access the training while at the BBAC, in their home, or in another location of their choice. Internal Review Board and Human Subjects Review Board approval were secured before data collection.

Data Analysis

This study involved analyzing data from a database collected by the primary investigator in the Spring 2022 semester. This study used a pre-test/post-test experimental design to measure the trauma-awareness of tutors in a D1 Academic-Athletic Department and examine whether a single, one-hour professional development training could increase trauma-awareness of tutors in the institution's Academic-Athletic Department. Because the Academic-Athletic Department wanted all of their tutors to receive the training, there is not a control group for this study.

All ($N=170$) tutors in the institution's Academic-Athletic Department were invited to participate with the goal of recruiting 65 participants. The sample size was determined by a G*Power analysis for a paired samples t-test with an effect size of .8, .05 error probability, and power of .9.

CHAPTER 4

RESULTS

This exploratory study involved analyzing data from a database collected by the primary investigator in the Spring 2022 semester. This study used a pre-test/post-test intervention design to measure the trauma-awareness of tutors in the institution's Academic-Athletic Department and whether a single, one-hour professional development training could increase trauma-awareness of tutors in the institution's Academic-Athletic Department.

All 170 tutors in the institution's Academic-Athletic Department were invited to participate. Preliminary tests were conducted to determine if assumptions were met for parametric tests. Additionally, data were analyzed to determine if the response to training varied across demographics.

The baseline and impact of the TAPDT was measured using The Trauma-Informed Care in Academic-Athletics Survey Pre-/Post- training. The survey looked at participants' understanding of the term trauma-informed care, occurrences that may cause trauma, the effects of trauma, and the ability of participants to support individuals with trauma.

Does participating in the TAPDT program improve trauma awareness?

Of primary interest to the current study was whether participation in the TAPDT increased trauma awareness. Participants completed a survey assessing trauma awareness on twelve items on a 5-point Likert scale. Responses were scored as 0 = *Strongly Disagree*; 1 = *Disagree*; 2 = *Neither agree nor disagree*; 3 = *Somewhat agree*; and 4 = *Strongly agree*.

First, a paired-samples *t*-test was conducted to examine whether participating in the TAPDT significantly improved overall mean scores on the Trauma-Informed Care in Academic-Athletics Survey. Results indicated that there was a statistically significant increase participants' trauma-awareness after completing the program (*Pre*: $M = 3.21, SD = .59$; *Post*: $M = 3.82, SD = .28$): $t(84) = 10.93, p < .001, d = 1.2$).

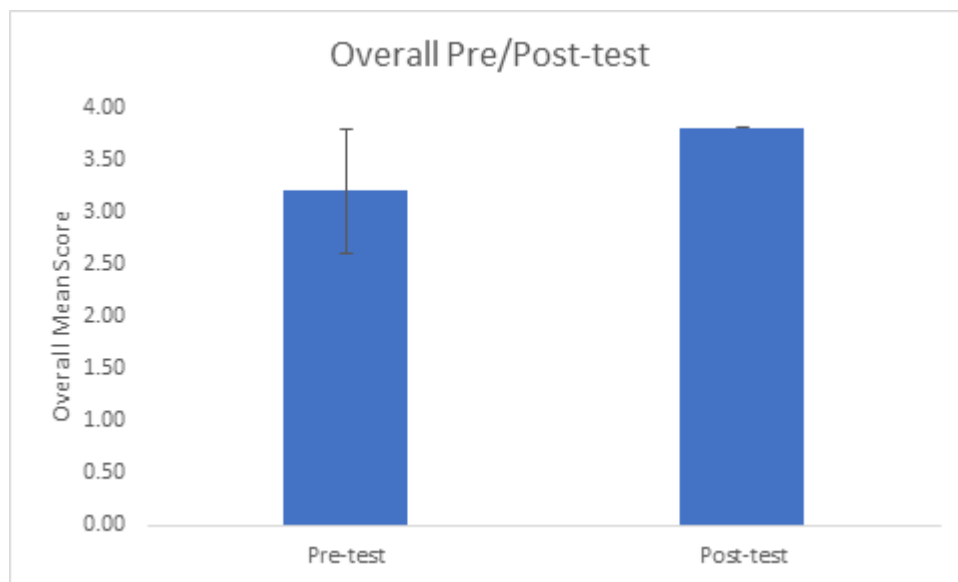


Figure 3. *Overall Pre/Post-test Means*

What aspects of trauma awareness were affected by participation in the trauma awareness professional development training (TAPDT)?

Because the paired-samples *t*-test of the overall mean scores was significant, an additional series of tests were conducted to examine the impact of the program on each survey item. The aim of these analyses was to identify more specific areas of impact to provide additional support for the program. Because each question was scored ordinally on a 5-point

Likert scale, a series of Wilcoxon signed-rank tests were used to examine Pre-/Post- responses to individual survey items (see Figure 4).

The Wilcoxon signed-rank test is a non-parametric test to compare ordinal, matched data. Whereas the paired samples t-test assesses whether the average difference between two observations is equal to 0. Conversely, the Wilcoxon signed rank test computes the difference between each set of pairs and compares the sample medians.

The results of the Wilcoxon signed-rank tests indicate that the majority of the questions exhibited significant improvement from Pre to Post (see Appendix C). The exceptions were questions two (“I recognize sexual abuse as a form of trauma.”) and 3 (“I recognize physical abuse as a form of trauma.”). The TAPDT did not significantly impact tutors’ rating of question two ($Z = -1.84, p = .066$). Question two Median response was 4/strongly agree at Pre- and 4/strongly agree at Post-. The TAPDT also did not significantly impact tutors’ rating of question three ($Z = -1.41, p = .157$). Question three Median response was 4/strongly agree at Pre- and 4/strongly agree at Post-.

The results of the Wilcoxon signed-rank test for question one was significant ($Z = -5.51, p = <.001$). Question one Median response was 4/strongly agree at Pre- and 4/strongly agree at Post-. This significance is due to 34 participants increasing their Likert scale ranking from Pre- to Post-, 51 participants’ Likert scale ranking remaining the same at Pre- and Post-, and 0 participants reducing their Likert scale ranking from Pre- to Post-. Although these changes were not enough to impact the Post- Median, the change in the number of participants selecting 4/strongly agree was significant. Table 2.

- 1) Does participating in the TAPDT program improve trauma awareness?

2) What aspects of trauma awareness were affected by participation in the trauma awareness professional development training (TAPDT)?

Table 2. *Individual Survey Items*

Item Number	Item Stem	Pre-Median Score	Post-Median Score	Z	P	Negative ranks	Positive Ranks	Ties
1	I am familiar with the term trauma	4	4	-5.51	< .001	0	34	51
2	I recognize sexual abuse as a form of trauma.	4	4	-1.84	.066	0	4	81
3	I recognize physical abuse as a form of trauma.	4	4	-1.41	.157	1	4	80
4	I recognize emotional abuse as a form of trauma.	4	4	-2.33	.020	0	6	79
5	I am familiar that exposure to drug abuse, domestic violence, criminal activity, and mental illness is a form of a trauma.	4	4	-2.36	.018	1	8	76
6	I am familiar with the effects of trauma on an individual's overall health and social well-being.	4	4	-4.58	<.001	3	30	52
7	I can identify student behaviors that may be indicative of someone who has experienced or is experiencing trauma.	3	4	-6.89	<.001	1	60	24
8	I am knowledgeable about the effects of trauma on learning.	3	4	-6.4	<.001	0	52	33
9	I am knowledgeable about the effects of	3	4	-6.40	<.001	0	51	34

	trauma on student behaviors.							
10	I am knowledgeable about the effects of trauma on students' academic success.	3	4	-6.07	<.001	0	46	38
11	I am knowledgeable regarding how faculty/staff may inadvertently re-traumatize students.	3	4	-6.73	<.001	0	58	27
12	I am comfortable in my ability to support students who have experienced or are experiencing trauma.	3	4	-6.77	<.001	1	58	26

Demographic Analyses

In order to determine whether the pre-test scores and the change in scores from pre- to post- were significantly affected by participant sex, race, age, previous exposure to trauma training, or K-12 work experience a series of one-way ANOVAs were conducted. First, assumption testing was conducted to ensure that all data met the normality and homogeneity of variance requirements for a one-way ANOVA.

Normality Testing

Prior to the analysis, Kolmogorov-Smirnov and Shapiro-Wilk tests were used to examine whether each level of each independent variable (i.e., sex, race, age, previous exposure to trauma training, previous K-12 work experience) were normally distributed across each dependent variable (i.e., pre-test scores and change in scores from pre- to post-). The results of these analyses indicated that sex, race, and K-12 work experience were normally distributed across pre-test scores, while race and K-12 work experience were normally distributed across the change in scores. All other variables were not normally distributed and therefore unsuited for a one-way ANOVA. See Table 3.

Table 3. Normality Testing for One-way ANOVAs

Independent Variable	Dependent Variable	Level	Kolmogorov-Smirnov			Shapiro-Wilk		
			Statistic	df	Sig	Statistic	df	Sig
Sex	Pre- Test	Male	.15	31	.06	.95	31	.19
		Female	.12	52	.05	.91	52	<.001
	Change in Scores	Male	.12	31	.20	.93	31	.05
		Female	.13	52	.03	.90	52	<.001
Race	Pre-Test	Minority	.22	15	.05	.92	15	.17
		Non-minority	.10	68	.09	.94	68	.002
	Change in Scores	Minority	.17	15	.20	.87	15	.03
		Non-minority	.11	68	.06	.93	68	<.001
Age	Pre-Test	College aged	.10	46	.20	.97	46	.305
		Non-college aged	.16	37	.02	.88	37	<.001
	Change in Scores	College aged	.08	46	.20	.95	46	.031
		Non-college aged	.16	37	.02	.87	37	<.001
K-12 Experience	Pre-Test	Experience	.163	22	.20	.85	22	.003
		No Experience	.086	61	.135	.96	61	.026
	Change in Scores	Experience	.15	22	.200	.88	22	.012
		No Experience	.1	61	.200	.93	61	.002
Prior Trauma Training Exposure	Pre-Test	Exposure	.29	18	<.001	.80	18	.002
		No exposure	.11	65	.035	.95	65	.010
	Change in Scores	Exposure	.33	18	<.001	.76	18	<.001
		No exposure	.08	65	.200	.95	65	.007

Homogeneity of Variance

Prior to the analysis, the Levene's test for homogeneity of variance was used to examine whether there were serious violations of the assumption of homogeneity of variance across groups. These analyses were only conducted for variables that adhered to the normality assumption. The results of these analyses indicated that sex, race, and K-12 work experience adhered to the variance assumption across pre-test scores, while race and K-12 work experience adhered to this assumption across the change in scores. See Table 4.

Table 4. *Homogeneity of Variance Testing for One-way ANOVAs*

Independent Variable	Dependent Variable	Levene Statistic	<i>df</i> ₁	<i>df</i> _s	Sig.
Sex	Pre-Test	.9	1	81	.346
Race	Pre-Test	.01	1	83	.91
	Change in Scores	.02	1	83	.88
K-12 Experience	Pre-Test	.13	1	83	.724
	Change in Scores	.49	1	83	.49

One-way ANOVAs

Sex

A one-way analysis of variance (ANOVA) was conducted in order to determine whether pre-test scores were significantly different for males ($N = 31$) versus females ($N = 52$). The pre-test scores were approximately normally distributed with no extreme outliers. Prior to the analysis, Levene's test for homogeneity of variance was used to examine whether there were serious violations of the assumption of homogeneity of variance across groups, but no significant

violation was found: $F(1, 81) = 0.897, p = 0.346$). The results of the one-way ANOVA indicate that females ($M = 3.30, SD = .603$) scored significantly higher on the pre-test than males ($M = 3.08, SD = .554$): $F(1, 81) = .9, p = .346$.

Race

A one-way analysis of variance (ANOVA) was conducted in order to compare the mean pre-test score for 85 participants divided into groups by race: minority ($N = 17$) and non-minority ($N = 68$). The pre-test scores were approximately normally distributed with no extreme outliers. Prior to the analysis, Levene's test for homogeneity of variance was used to examine whether there were serious violations of the assumption of homogeneity of variance across groups, but no significant violation was found: $F(1, 83) = 0.01, p = 0.91$). The results of the one-way ANOVA indicate that minority ($M = 3.14, SD = .66$) scored significantly higher on the pre-test than non-minority ($M = 3.23, SD = .57$): $F(1, 83) = .02, p = .883$.

K-12 Work Experience

A one-way analysis of variance (ANOVA) was conducted in order to determine whether pre-test scores were significantly different for no experience ($N = 63$) versus experience ($N = 22$). The pre-test scores were approximately normally distributed with no extreme outliers. Prior to the analysis, Levene's test for homogeneity of variance was used to examine whether there were serious violations of the assumption of homogeneity of variance across groups, but no significant violation was found: $F(1, 81) = 0.49, p = 0.485$). The results of the one-way ANOVA indicate that K-12 work experience ($M = 3.34, SD = .64$) scored significantly higher on the pre-test than no K-12 work experience ($M = 3.17, SD = .56$): $F(1, 83) = .13, p = .724$. (See Table 5)

Table 5. One-way ANOVAs between Demographic Factors and TAPDT Pre-Test and Score Increases

Independent Variable	Dependent Variable	Level	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig</i>
Sex	Pre-Test	Male	3.08	.55	1	2.8	.098
		Female	3.30	.603			
Race	Pre-Test	Minority	3.14	.66	1	.38	.54
		Non-minority	3.23	.57			
	Change in Scores	Minority	.53	.56	1	.57	.453
		Non-minority	.63	.50			
K-12 Experience	Pre-Test	No experience	3.17	.56	1	1.46	.231
		Experience	3.34	.64			
	Change in Scores	No experience	.62	.50	1	.08	.78
		Experience	.58	.56			

CHAPTER 5

DISCUSSION

In the current study, academic-athletic tutors at a southeastern D1 university participated in a one-hour trauma-awareness professional development training program. The goal of the project was to increase overall trauma-awareness by enhancing awareness, knowledge, and skill confidence among the academic-athletic tutors. Participants completed a pre/post-test to self-assess trauma-awareness. Of interest was the ability of a single, one-hour professional development training to increase overall trauma-awareness. The Academic-Athletic Department wanted all of their tutors to receive the TAPDT. As a result, there was not a control group for this study. All of the tutors who participated in the study received the TAPDT. The absence of a control group is a limitation of the study. Still, the current study is promising in that, despite these limitations, significant change was observed. Because of this, the current work has significant implications for the increase of trauma-awareness in higher education.

Can a single, one-hour TAPDT increase the trauma awareness of academic-athletic tutors at a southeastern D1 university?

This study found that a single, one-hour TAPDT resulted in an increase in trauma awareness in academic-athletic tutors. This result provides a practical first step (Missouri Department of Elementary and Secondary Education, 2019) towards increasing trauma-awareness among faculty and staff in higher education similar to what was found in the Doughty study (2020). This study adds to the findings by Doughty (2020) that the TIC-CCS is useful in

measuring change among participants of a TAPDT. Although the TIC-CCS was designed for nurse and criminal justice faculty, the results of this test indicate that with moderate modification, it may also be a good measure to assess trauma-awareness in academic-athletic tutors. Future studies examining the psychometric properties of using the TIC-CCS in extended populations are needed.

Additionally, results showed significant improvement from pre-test to post-test except in questions two and three. This survey could be improved by removing question two (“I recognize sexual abuse as a form of trauma.”) and question three (“I recognize physical abuse as a form of trauma.”). The training did not result in significant change in these two questions as a result of the TAPDT. The lack of change may be a result of increased public awareness about sexual and physical violence due to recent occurrences, namely the #MeToo Movement (Baer, 2016; Maier, 2022; Kaufman et al., 2021; Williams et al., 2019), the Black Lives Matter Movement, and the brutal and public deaths of individuals such as George Floyd and Ahmaud Arbery (Byrd et al., 2017; Schein et al., 2021). Future researchers may benefit by removing these questions and utilizing questions that give more insight into skill development.

Given the demand on the time of faculty and staff in higher education, these results are favorable since a one time, one-hour training will not add significantly to already demanding time requirements of faculty and staff (Bozeman & Gaughan, 2007, 2011). The training provided in Doughty’s study (2020) and the training provided in the current study were different due to the academic-athletic tutors supporting students with different needs and in a different environment. However, in spite of these differences, the results of both studies were significant (Doughty, 2020). The results seen from a single, one-hour TAPDT amongst two different subpopulations within higher education (nurse and criminal justice faculty and academic-athletic tutors) is

promising due to its considerable translatability and portability. The effort to implement trauma-awareness in higher education at large would benefit from research on the generalizability of these results with a population of faculty and staff that is representative of an entire institution, rather than only athletic-tutors.

Benefits of Increased Trauma Awareness. An increase in trauma awareness as a result of a single one-hour TAPDT enables programs to increase their multicultural awareness as laid out through the MSJCC model (Brown et al., 2012; Green et al., 2015; Retts et al., 2016; Roseby & Gascoigne, 2021) by developing skills that enable them to identify behaviors that may be signs of trauma and to know how to best support students in a way that is both responsive and respectful (Carter, 2005; Sue, 1998). The development of trauma-awareness, trauma-knowledge and skills increases an academic-athletic program's ability to provide support at a universal level to student athletes that have developed maladaptive behaviors and academic challenges as a result of backgrounds of trauma in a way that keeps both the tutor and the student-athlete safe, increases the likelihood that the student will be able to reengage with learning, decreases unwanted behaviors, and avoids retraumatization of the student-athlete (Perry & Szalavitz, 2017; Perry & Winfrey, 2021; Van der Kolk, 2015).

The results of this study also indicate that the increase in trauma awareness was not limited to increasing the awareness of what trauma is, but also the impact of trauma and an increase in confidence in participant's abilities to support a student with a background of trauma. Future research should look more closely at the impact of a one-hour trauma training on increasing knowledge and skill by utilizing a measure that looks at those areas more specifically. The results of the current study are promising in that they indicate that just one-hour of professional development training can have significant impacts on equipping higher education

faculty and staff to support student safety and success related to trauma awareness. Future studies may replicate this model on other relevant professional development topics, for example, increasing skills that enable faculty and staff to respond to a dysregulated student in a way that is in alignment with the environment and enable the student to reengage in class, social activities, or athletic activities.

Study Limitations

While the TAPDT resulted in significant change in trauma-awareness, it is important to note that because this was a convenience sample, there was a lack of diversity. This lack of diversity reflects who responded to the survey questions after viewing the trauma training video. In future projects, providing statements prior to viewing the video related to confidentiality of survey responses and cultural appropriate statements related to trauma training as well as possibility having a member from a diverse group participate in portions of the trauma training manual may increase the number of responses from tutors who identify as racially diverse. Additionally, all the participants were employed by the same southeastern university. A larger sample size with greater diversity in institutions would likely increase the diversity of participants. This diversity in participants is important in order to be a more representative sample of the population the program is designed for. Research has shown that culture impacts how individuals interpret trauma (Chiao et al., 2008; Ford & Mauss, 2015; Jack et al., 2009; Martinez et al., 2014;) thus the program may impact individuals with various cultural backgrounds differently. The training would benefit from this understanding and any changes that may need to be made to better serve a more diverse population.

How other trainings may have impacted outcomes

New tutors began their training with a virtual tour of the Academic-Athletic Center and the “Welcome & Overview” training. In this training, the academic-athletic mission statement, core values, structure of the Athletic-Academic Center, goals, operation hours, important dates, current academic performance of student-athletes, and staff roles were covered. The next training introduced via Blackboard was “Compliance Training.” This training was for new and returning tutors and included training on the following: NCAA regulations, unethical conduct, academic misconduct, sports wagering, extra benefits, and major academic fraud cases from around the nation. The trauma awareness training was introduced next. Finally, in-person training was conducted with all tutors which included Title IX training, staff expectations, tutoring types and practices, and TeamWorks software training. Title IX training introduced tutors to what Title IX is and how to report Title IX infractions. Staff expectations training covered the rules and regulations put forth by the NCAA and the institution that tutors are required to abide by to avoid termination. Tutoring types and practices covered what is expected of tutors in tutoring sessions as well as what is not allowed. TeamWorks is the software used by the institution to manage tutoring sessions as well as other activities the student-athletes engage in. During the training, Tutors learned what the software looks like and how to use it to keep up with scheduling, tutoring assignments, and session reporting.

While these trainings were introduced on Blackboard in the order previously mentioned, there was no mechanism that guaranteed tutors engaged the trainings in this order. Should a tutor decide to do the Trauma Awareness Training first and then begin the new tutor training, that would have been possible. While the inability to control the order of training engagement is a limitation, it is unlikely to have impacted the outcomes of the study since the only training that

addresses the topics measured by the pre-test/post-test is the Trauma Awareness Training. A limitation of this study is that face validity of the training was not evaluated nor was the content or provider of the training. Future research on trauma-awareness professional development training would benefit from the evaluation of the current training and the provider in order to determine if the training does what it is intended to do and what things need improvement.

An additional direction for future research is to see if a one-hour professional development training holds over time. A limitation of this study is that it only evaluates the impact of the trauma-awareness training on the awareness of the academic-athletic tutors at one point in time. Adding an additional measure at a later time would allow greater understanding of the impact of the training.

To further explore the impact of the training as well as areas that may need to be improved, the research would benefit from studies that include additional measures of awareness in order to further eliminate any bias related to the dependent. Such measures might be qualitative or more objective in nature. An additional limitation of the current study is that the use of only one measure may have resulted in other outcome variables not being assessed.

Implications for Trauma-Awareness in Higher Education

This study is a response to a gap in the literature on trauma-awareness in higher education. The first step toward trauma-informed education is an increase in trauma awareness through professional development training (Concepcion & Nadolski, 2021; Doughty, 2019; National Academies of Sciences, Engineering, and Medicine et al., 2021). However, there is an absence in the literature of the effectiveness of TAPDT among academic-athletic tutors in higher education. While this study worked with a specific subpopulation of faculty/staff within higher education, it is likely that these results would be similar for all faculty/staff within higher

education since the Doughty (2020) study also resulted in an increase in trauma-awareness with just a one-hour professional development training with a different subpopulation of higher education faculty/staff. This is an area of focus for future research.

Implications for the Field of School Psychology

School psychologists are equipped to serve students with backgrounds of trauma on an individual level, but they are also trained to consult and collaborate with educational systems and the various members of the system (Howard, 1977; Ingraham, 2015; NASP, 2010; Sulkowski, 2012). The multi-tiered approach that school psychologists are trained in enable them to not only support students from backgrounds of trauma with their skills, but also to increase faculty and staff's awareness and knowledge of trauma while also teaching the faculty and staff skills to better support their students. Becoming trauma-informed requires a system-wide approach that begins with professional development (Missouri Department of Elementary and Secondary Education, 2019) that the training of a school psychologist uniquely equips them to facilitate.

The role of school psychologist has been identified as that of a “scientist-practitioner who assumes a more progressive, proactive leadership position in initiating reform” (Davis et al., 2004) through the application of a problem-solving, collaborative approach that utilizes interventions and preventative measures to alter student outcomes (Ysseldyke & Elliot, 1999). The results of this study indicate that school psychologists can lead the way in moving academic-athletic programs in higher education institutions towards becoming trauma-informed environments for the benefit and safety of students and faculty and staff. This study, like the Doughty study (2020), demonstrates that the first step, trauma-awareness, can be made utilizing a single, one-hour trauma-awareness professional development training.

Future Directions

This research was conducted amongst a subpopulation within higher education, academic-athletic tutors. However, this type of support should be available to all students within the higher education environment. As such, the research would benefit by being conducted amongst a more generalized population of higher education faculty and staff to ensure that more students benefit from trauma aware professors, coaches, and other staff.

Need something here on the awareness, knowledge, and skill model.

This is guided by the MSJCC model. The study indicates there was a change in trauma awareness. Therefore, it would be important to use the model to assess not only awareness, but knowledge and skills. Given that the model also considers factors of inclusion, the MSJCC model is a great guide to utilize in thinking about the diverse tutor population. For example, in an effort to increase participation by tutors with diverse identities, the training program should include a section at the beginning addressing the positionality of the presenter. Additionally, the study may also benefit by the program being delivered by one or more presenters with diverse identities.

REFERENCES

- American Psychological Association. (2020). Trauma. In *APA Dictionary of Psychology*. <https://dictionary.apa.org/trauma>
- Aron, C. M., Harvey, S., Hainline, B., Hitchcock, M. E., & Reardon, C. L. (2019). Post-traumatic stress disorder (PTSD) and other trauma-related mental disorders in elite athletes: A narrative review. *British Journal of Sports Medicine*, *53*(12), 779-784. <https://doi.org/10.1136/bjsports-2019-100695As>
- Aston-Jones, G., Ennis, M., Pieribone, J., Nickel, W. T., & Shipley, M. T. (1986). The brain nucleus locus coeruleus: restricted afferent control over a broad efferent network. *Science*, *234*(4777), 734-737. <https://doi.org/10.1126/science.3775363>
- Baer, H. (2016). Redoing feminism: Digital activism, body politics, and neoliberalism. *Feminist Media Studies*, *16*(1), 17-34. <https://doi.org/10.1080/14680777.2015.1093070>
- Bateman, A., & Morgan, A. D. (2017). The postinjury psychological sequelae of high-level Jamaican athletes: Exploration of a posttraumatic stress disorder-self-efficacy conceptualization. *Journal of Sport Rehabilitation*, *28*(2), 144-152. <https://doi.org/10.1123/jsr.2017-0140>
- Baucom, C., & Lantz, C. (2001). Faculty attitudes toward male Division II student-athletes. *Journal of Sport Behavior*, *24*(3), 265-276. <https://www.proquest.com/scholarly-journals/faculty-attitudes-toward-male-division-ii-student/docview/215868611/se-2?accountid=14472>
- Bayar, A. (2014). The components of effective professional development activities in terms of teachers' perspective. *International Online Journal of Educational Sciences*, *6*(2), 319-37. <https://dx.doi.org/10.15345/iojes.2014.02.006>
- Beehler, S., Birman, D., & Campbell, R. (2012). The effectiveness of cultural adjustment and trauma services (CATS): Generating practice-based evidence on a comprehensive, school-based mental health intervention for immigrant youth. *American Journal of Community Psychology*, *50*(1), 155-168. <https://doi.org/10.1007/s10464-011-9486-2>
- Berger, E. (2019). Multi-tiered approaches to trauma-informed care in schools: A systematic review. *School Mental Health*, *11*, 650-664. <https://doi.org/10.1007/s12310-019-09326-0>

- Blackboard Help. (n.d.). Retrieved February 13, 2022, from https://help.blackboard.com/Learn/Instructor/Ultra/Getting_Started/What_Is_Blackboard_Learn
- Bozeman, B., & Gaughan, M. (2007). Impacts of grants and contracts on academic researchers' interactions with industry. *Research Policy*, 36(5), 694-707.
- Bozeman, B. & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *The Journal of Higher Education*, 82(2), 154-186. <https://doi.org/10.1353/jhe.2011.0011>
- Brown, B. J., Jensen, J. F., Hodgson, J. L., Schoemann, A. M., & Rappleyea, D. L. (2020). Beyond the lines: Exploring the impact of adverse childhood experiences on NCAA student-athlete health. *Journal of Issues in Intercollegiate Athletics*. 8-38.
- Bryman, A. (2012). *Social Search Methods* (4th ed.). Oxford University Press.
- Byrd, W. C., Gilbert, K. L., & Richardson, Jr, J. B. (2017). The vitality of social media for establishing a research agenda on black lives and the movement. *Ethnic and Racial Studies*, 40(11), 1872-1881.
- Carter, R.T. (Ed.). (2005). *Handbook of Racial-Cultural Psychology and Counseling: Training and Practice*. John Wiley & Sons, Inc.
- Center for Health Care Strategies. (2021, March). *What is trauma?* Trauma-Informed Care Implementation Resource Center. <https://www.traumainformedcare.chcs.org/what-is-trauma/>
- Child and Adolescent Health Measurement Initiative. (2017, October). *Adverse childhood experiences among U.S. children*. CAHMI: The child & adolescent health measurement initiative. [https://www.cahmi.org/docs/default-source/resources/issue-brief-adverse-childhood-experiences-among-us-children-\(2017\).pdf?sfvrsn=6c79088_0](https://www.cahmi.org/docs/default-source/resources/issue-brief-adverse-childhood-experiences-among-us-children-(2017).pdf?sfvrsn=6c79088_0)
- Cimer, S.O., Cakir, I., & Cimer, A. (2010). Teachers' views on the effectiveness of in-service courses on the new curriculum in Turkey. *European Journal of Teacher Education*, 33(1), 3-15. <https://doi.org/10.1080/02619760903506689>
- Chow, G. M., Bird, D. B, Gabana, N. T., Cooper, B. T., & Swanbrow Becker, M. A. (2021). A program to reduce stigma toward mental illness and promote mental health literacy and help-seeking in National Collegiate Athletic Association Division I student-athletes. *Journal of Clinical Sport Psychology*, 15, 185-205. <https://doi.org/10.1123/jcsp.2019-0104>
- Comeaux, E. (2011). Examination of faculty attitudes toward division I college student-athletes. *College Student Affairs Journal*, 30(1), 75-87. <https://www.jstor.org/stable/41341157>

- Comeaux, E. (2012). Unmasking athlete microaggressions: Division I student-athletes' engagement with members of the campus community. *Journal of Intercollegiate Sport*, 5(2), 189-198. <https://doi.org/10.1123/jis.5.2.189>
- Concepcion, A., & Nadolski, K. (2021). "Chapter 8 A Call for Trauma Informed Understanding at Colleges and Universities". In *Trauma-Informed Classrooms*. Leiden, The Netherlands: Brill. (pp.205-225). https://doi.org/10.1163/9789004465367_008.
- Davidson, S. (2017). Trauma-informed practices for postsecondary education: A guide. <https://educationnorthwest.org/sites/default/files/resources/trauma-informed-practices-postsecondary-508.pdf>
- Davis, A. S., McIntosh, D. E., Phelps, L., & Kehle, T. J. (2004). Addressing the shortage of school psychologists: A summative overview. *Psychology in the Schools*, 41(4), 489-495. <https://doi.org/10.1002/pits.10192>
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181-189. <https://doi.org/10.3102/0013189X08331140>
- Desimone, L. M., & Garet, M. S. (2015). Best practices in teachers' professional development in the United States. *Psychology, Society and Education*, 7(3). 252-263
- Doughty, K. (2020). Increasing trauma-informed awareness and practice in higher education. *Journal of Continuing Education in the Health Professions*, 40, 66-68. <https://doi.org/10.1097/CEH.0000000000000279>
- Engstrom, C., Sedlacek, W., & McEwen, M. (1995). Faculty attitudes toward male revenue and nonrevenue student-athletes. *Journal of College Student Development*, 36(6), 217-227.
- Equity in Athletics Data Analysis (EADA). (2021-2022). The University of Alabama (OPE ID: 00105100) [Data set]. U.S. Department of Education. <https://ope.ed.gov/athletics/#/institution/details>
- Figler, S. K., & Figler, J. E. (1984). *The athlete's game plan for college and career*. Petersons.
- Fitzgerald, M. M., & Cohen, J. C. (2012). Trauma-focused cognitive behavior therapy for school psychologists. *Journal of Applied School Psychology*, 28(3), 294-315. <https://doi.org/10.1080/15377903.2012.696037>
- Garet, M. A., Porter, C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945. <https://doi.org/10.3102/00028312038004915>

- Gusky, T. R. (2003). What makes professional development effective? *Phi Delta Kappan*, 84(10), 748-750. <https://journals.sagepub.com/doi/pdf/10.1177/003172170308401007>
- Gusky, T. R., & Yoon, K. S. (2009). What works in professional development? *Phi Delta Kappan*, 90(7), 495-500. <https://journals.sagepub.com/doi/pdf/10.1177/003172170909000709>
- Gutierrez, D., & Gutierrez, A. (2019). Developing a trauma-informed lens in the college classroom and empowering students through building positive relationships. *Contemporary Issues in Education Research*, 12(1), 11-18. <https://doi.org/10.19030/cier.v12i1.10258>
- Hanson, M. (2022). *College enrollment & Student demographic statistics*. Education Data Initiative. <https://educationdata.org/college-enrollment-statistics>
- Healing Attention. (2018). Stages of development in becoming a trauma-informed organization. *The Trauma Healing Project*. <http://www.healingattention.org>
- Herrenkohl, T. I., Hong, S., & Verbrugge, B. (2019). Trauma-informed programs based in schools: Linking concepts to practices and assessing the evidence. *American Journal of Community Psychology*, 64373-388.
- Im, S., Greenlaw, M., & Lee, J. (2020). Cumulative trauma exposure and mindfulness in college students. *Journal of College Counseling*, 23(1). 30-43. <https://doi-org.libdata.lib.ua.edu/10.1002/jocc.12147>
- Ivey, A. E., Ivey, M. B., & Zalaquett, C.P. (2015). *Intentional Interviewing and Counseling: Facilitating Client Development in a Multicultural Society*, 8th Edition. Ringgold, Inc.
- Karatekin, C. (2017). Adverse childhood experiences (ACEs), stress, and mental health in college students. *Stress and Health*, 34(1), 36-45. <https://doi.org/10.1002/smi.2761>
- Kataoka, S. H., Vona, P., Acuna, A., Jaycox, L., Escuden, P., Rojas, C., Ramirez, E., Langley, A., & Stein, B. D. (2018). Applying a trauma informed school systems approach: Examples from school community-academic partnerships. *Ethnicity and Disease*, 8(2), 417-426. <https://doi.org/10.8865/ed.28.S2.417>
- Kaufman, M. R., Dey, D., Crainiceanu, C., Dredze, M. (2021). #MeToo and Google inquiries into sexual violence: A hashtag campaign can sustain information seeking. *Journal of Interpersonal Violence*, 36(19-20), 9857-9867. <https://doi.org/10.1177/0886260519868197>

- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry*, 62(6), 593-602. <https://doi.org/10.1001.archpsyc.62.6.593>
- Kinniburgh, K. J., Blaustein, M., Spinazzola, J., & van der Kolk, B. A. (2005). Attachment, self-regulation, and competency: A comprehensive intervention framework for children with complex trauma. *Psychiatric Annals*, 35(5), 424-430. <https://doi.org/10.3928/00485713-20050501-08>
- Maddox, R. P., Rujimora, J., Nichols, L. M., Williams, M. K., Hunt, T., & Carter, R. A. (2022). Trauma-informed schools: Implications for special education and school counseling. *Teaching Exceptional Children*, 20(10), 2-11. <https://doi.org/10.1177/00400599221107142>
- Maier, S. L. (2022). Rape victim advocates' Perceptions of the #MeToo Movement: Opportunities, challenges, and sustainability. *Journal of Interpersonal Violence*, 0(0). <https://doi.org/10.1177/08862605221081929>
- Malinauskas, R. (2010). The associations among social support, stress, and life satisfaction as perceived by injured college athletes. *Social Behavior and Personality: an international journal*, 38(6), 741-752. <https://doi.org/10.2224/sbp.2010.38.6.741>
- Massey, W., & Johnson, S. (2020, August 27). *Adverse childhood experiences: What coaches should know*. National Federation of State High School Associations. [Nfhs.org/articles/adverse-childhood-experiences-what-coaches-should-know/#:~:text=In%20a%20study%20of%20477,household%20abuse%20\(16.0%25\)](https://www.nfhs.org/articles/adverse-childhood-experiences-what-coaches-should-know/#:~:text=In%20a%20study%20of%20477,household%20abuse%20(16.0%25))
- McIntosy, K., & Goodman, S. (2016). *Integrated multi-tiered systems of support: Blending RTI and PBIS*. Guilford Publications.
- McIntyre, E. M., Baker, C. N., & Overstreet, S. (2019). Evaluating foundational professional development training for trauma-informed approaches in schools. *Psychological Services*, 16(1). <https://dx.doi.org/10.1037/ser0000312>
- Meyer, S. K. (2005). NCAA academic reforms: Maintaining the balance between academics and athletics. In *Phi Kappa Phi Forum*, (Vol. 85, No. 3, p.15). National Forum: Phi Kappa Phi Journal.
- Missouri Department of Elementary and Secondary Education (2019). *The Missouri Model for Trauma-Informed Schools*. Retrieved from dese.mo.gov/sites/default/files/cnsl_Missouri_Model%20school_guidance_doc.pdf
- Mills, G. E., & Gay, L. R. (2016). *Educational research: Competencies for analysis and application* (11th ed.). Pearson.

- Mohammed, W. A., Pappous, A., & Sharma, D. (2018). Effect of mindfulness based stress reduction (MBSR) in increasing pain tolerance and improving the mental health of injured athletes. *Frontiers in Psychology, 9*, 722. <https://doi.org/10.3389/fpsyg.2018.00722>
- Morton, B., & Berardi, A. A. (2018). Trauma-informed school programming: Applications for mental health professionals and educator partnerships. *Journal of Child and Adolescent Trauma, 11*(4), 487-493. <https://doi.org/10.1007/s40653-017-0160-1>
- National Academies of Sciences, E., and M., Health and Medicine Division, Policy and Global Affairs, Board on Health Sciences Policy, Board on Higher Education and Workforce, Committee on Mental Health, S. U. and W. in S. U. and G. E., Layne A. Scherer, & Alan I. Leshner. (2021). *Mental Health, Substance Use, and Wellbeing in Higher Education: Supporting the Whole Student*. Consensus Study Report. Washington, DC: National Academies Press. <https://search-ebSCOhost-com.libdata.lib.ua.edu/login.aspx?direct=true&db=nlebk&AN=2761525&suite=ehost-live&scope=site>
- National Collegiate Athletic Association. (2021a, November). *NCAA Guide for the College-Bound Student-Athlete 2021-2022*. NCAA Eligibility Center. http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/CBSA.pdf
- National Collegiate Athletic Association. (2021b). *NCAA Demographics Database*. NCAA. <https://www.ncaa.org/about/resources/research/ncaa-demographics-database>
[ncaa.org/sports/2018/12/13/ncaa-demographics-database.aspx](https://www.ncaa.org/sports/2018/12/13/ncaa-demographics-database.aspx)
- Overstreet, S., & Chafouleas, S. M. (2016). Trauma-informed schools: Introduction to the special issue. *School Mental Health, 8*, 1-6. <https://doi.org/10.1007/s12310-016-9184-1>
- Perry, B. D. (1994). Neurobiological sequelae of childhood trauma: Post traumatic stress disorders in children. In M.M. Murburg (Ed.), *Catecholamine function in posttraumatic stress disorder: Emerging concepts* (pp.233-255). American Psychiatric Association.
- Perry, B. D. (1999). Memories of fear. *Splintered reflections*. Washington, DC: Basic Books, 9-38.
- Perry, B. D. (2005). Maltreatment and the developing child: How early childhood experience shapes early childhood and culture. *Centre for Children and Families in the Justice System*, 1-6.
- Perry, B. D., & Ablon, J. S. (2019). CPS as a Neurodevelopmentally Sensitive and Trauma-Informed Approach. In: Pollastri, A., Ablon, J., Hone, M. (eds) Collaborative Problem Solving. Current Clinical Psychiatry. Springer, Cham. https://doi.org/10.1007/978-3-030-12630-8_2

- Perry, B. D., Pollard, R. A., Blakley, T. L., Baker, W. L., & Vigilante, D. (1995). Childhood trauma, the neurobiology of adaptation, and “Use-dependent” development of the brain: How “states” become “traits.” *Infant Mental Health Journal*, *16*(4), 271-291. [https://doi.org/10.1002/4097-0355\(199524\)16:4<271::AID-IMHJ2280160404>3.0.CO;2-B](https://doi.org/10.1002/4097-0355(199524)16:4<271::AID-IMHJ2280160404>3.0.CO;2-B)
- Perry, B. D., & Szalavitz, M. (2017). *The Boy Who Was Raised as a Dog: And other stories from a child psychiatrist's notebook—what traumatized children can teach us about loss, love, and healing*. Hachette UK.
- Perry, B. D., & Winfrey, O. (2021). *What Happened to You?: Conversations on trauma, resilience, and healing*. Flatiron Books.
- Perry, D. L., & Daniels, M. L. (2016). Implementing trauma-informed practices in the school setting: A pilot study. *School Mental Health*, *8*(1), 177-188. <https://doi.org/10.1007/s12310-016-9182-3>
- Pope, M. L., & Miller, M. T. (1999). Support Services for Student-Athletes: Athletic Department and Student Affairs Officers Perceptions.
- Porche, M. V., Costello, D. M., & Rosen-Reynoso, M. (2016). Adverse family experiences, child mental health, and educational outcomes for a national sample of students. *School Mental Health*, *8*(1), 44-60. <https://doi.org/10.1007/s12310-016-9174-3>
- Posnanski, T. J. (2002). Professional development programs for elementary science teachers: An analysis of teacher self-efficacy beliefs and a professional development model. *Journal of Science Teacher Education*, *13*(2), 189-200. <https://doi.org/10.1023/A:1016517100186>
- Purtle, J., & Lewis, M. (2017). Mapping "trauma-informed" legislative proposals in U.S. Congress. Advanced online publication, *Administration and Policy in Mental Health and Mental Health Services Research*, 1-10. <https://doi.org/10.1007/s10488-017-0799-9>
- Psychology Today. (2021). *Trauma*. Psychology Today. <https://www.psychologytoday.com/us/basics/trauma>
- Putukian, M. (2016). The psychological response to injury in student athletes: A narrative review with a focus on mental health. *British Journal of Sports Medicine*, *50*(3), 145-148. <https://dx.doi.org/10.1136/bjsports-2015-095586>
- Ratts, M. J., Singh, A. A., Nassar-McMillan, S., Butler, S. K., & McCullough, J. R. (2016). Multicultural and social justice counseling competencies: Guidelines for the counseling profession. *Journal of Multicultural Counseling and Development*, *44*, 28-48. <https://doi.org/10.1037/a0040323>

- Roseby, S., & Gascoigne, M. (2021). A systematic review on the impact of trauma-informed education programs on academic and academic-related functioning for students who have experienced childhood adversity. *Traumatology*, 27(1), 149-167. <https://doi.org/10.1037-trm0000276>
- Sahin, I., & Yildirim, I. (2016). Transforming professional learning into practice. *ELT Journal*, 70(3), 241-252. <https://doi.org/10.1093/elt/ccv070>
- Sanderson, J., Zimmerman, M., Stokowski, & Fridley, A. (2020). "You had one job!" A case study of maladaptive parasocial interaction and athlete maltreatment in virtual spaces. *International Journal of Sport Communication*, 13(2), 221-238. <https://doi.org/10.1123/ijsc.2019-0129>
- Shalka, T. R. (2019a). Mapping the intersections of gender and college trauma. *International Journal of Qualitative Studies in Education*, 32(6), 560-575. <https://doi.org/10.1080/09518398.2019.1597207>
- Shalka, T. R. (2019b). Saplings in the hurricane: A grounded theory of college trauma and identity development. *The Review of Higher Education*, 42(2), 739-764. <https://doi.org/10.1353/rhe.2019.0013>
- Schein, J., Houle, C., Urganus, A., Cloutier, M., Patterson-Lomba, O., Wang, Y., King, S., Levinson, W., Guérin, A., Lefebvre, P., & Davis, L. L. (2021). Prevalence of post-traumatic stress disorder in the United States: a systematic literature review. *Current Medical Research and Opinion*, 37(12), 2151-2161. <https://doi.org/10.1080/03007995.2021.1978417>
- Singer, W. (1995). Development and plasticity of cortical processing architectures. *Science*, 270, 758-764. <https://doi.org/10.1126/science.270.5273.758>
- Sokel, F. (2019). The effectiveness of a professional development course: Teachers' perceptions. *ELT Journal*, 73(4), 409-418. <https://doi.org/10.1093/elt/ccz022>
- Stephens, D. W. (2020). Trauma-informed pedagogy for the religious and theological higher education classroom. *Religions*, 11(9), 449. <https://doi.org/10.3390/rel11090449>.
- Stokes, H., & Turnbull, M. (2016). *Evaluation of the Berry Street Education Model: Trauma informed positive education enacted in mainstream schools*. University of Melbourne Graduate School of Education, Youth Research Centre.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach*. <https://store.samhsa.gov/system/files/sma14-4884.pdf>

- Sue, D. W., Arredondo, P., & McDavis, R. J. (1992). Multicultural counseling competencies and standards: A call to the profession. *Journal of Multicultural Counseling and Development, 20*, 64-88. <http://doi.org/10.1002/j.2161-1912.1992.tb00563.x>
- Thomas, S., Crosby, S., & Vanderhaar, J. (2019). Trauma-informed practices in schools across two decades: An interdisciplinary review of research. *Review of Research in Education, 43*, 422-452. <http://doi.org/10.3102/0091732X18821123>
- Thompson, J. (2008). I like it like that: College student-athletes' attitudes about tutors' teaching strategies. *Ohio Communication Journal, 46*, 27-44.
- Tomalski, J., Clevinger, K., Albert, E., Jackson, R., Wartalowicz, K., & Petrie, T. A. (2019). Mental health screening for athletes: Program development, implementation, and evaluation. *Journal of Sport Psychology in Action, 10*(2), 121-135. <https://doi.org/10.1080/21520704.2019.1604589>
- Van der Kolk, B. A. (2009). Developmental trauma disorder towards a rational diagnosis for chronically traumatized children. *Praxis er Kinderpsychologie Und Kinderpsychiatrie, 58*(8), 572-586. <https://10.13109/prkk.2009.58.8.572>
- Van der Kolk, B. A. (2015). *The Body Keeps the Score: Brain, mind, and body in the healing of trauma*. Penguin Random House.
- Williams, J., Singh, L., & Mezey, N. (2019). #MeToo as Catalyst: Glimpse into 21st Century Activism. *U. Chi. Legal F., 371-394*. <https://p.proxy.law.ua.edu/login?url=https://heinonline.org/HOL/P?h=hein.journals/uchclf2019&i=376>
- Wisconsin Department of Public Instruction. (2018). *Trauma sensitive schools learning modules*. Retrieved from <https://dpi.wi.gov/sspw/mental-health/trauma/modules>
- Wolanin, A., Hong, E., Marks, D., Panchoo, K., & Gross, M. (2016). Prevalence of clinically elevated depressive symptoms in college athletes and differences by gender and sport. *British Journal of Sports Medicine, 50*(3), 167-171.
- Woodbridge, M. W., Sumi, W. C., Thornton, S. P., Fabrikant, N., Rouspil, K. M., Langley, A. K., & Kataoka, S. H. (2016). Screening for trauma in early adolescence: Findings from a diverse school district. *School Mental Health, 8*(1), 89-105. <https://doi.org/10.1007/s12310-015-9169-5>
- Yang, J., Peek-Asa, C., Lowe, J. B., Heiden, E., & Foster, D. T. (2010). Social support patterns of collegiate athletes before and after injury. *Journal of Athletic Training, 45*(4), 372-379. <https://doi.org/10.4085/1062-6050-45.4.372>

- Yang, J., Tibbetts, A. S., Covassin, T., Cheng, G., Nayar, S., & Heiden, E. (2012). Epidemiology of overuse and acute injuries among competitive collegiate athletes. *Journal of Athletic Training, 47*(2), 198-204. <https://doi.org/10.4085/1062-6050-47.2.198>
- Ysseldyke, J.E., & Elliot, J. (1999). Effective instructional practices: Implications for assessing educational environments. In C. R. Reynolds & T.B. Gutkin (Eds.) *The Handbook of School Psychology* (pp.497-518). John Wiley & Sons Inc.

APPENDIX A

TRAUMA-INFORMED CARE IN ACADEMIC ATHLETICS SURVEY (TIC-AAS)

	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
I am familiar with the term trauma-informed care.					
I recognize sexual abuse as a form of trauma.					
I recognize physical abuse as a form of trauma.					
I recognize emotional abuse as a form of trauma.					
I am familiar that exposure to drug abuse, domestic violence, criminal activity, and mental illness as a form of trauma.					
I am familiar with the effects of trauma on an individual's overall health and social well-being.					

I can identify student behaviors that may be indicative of someone who has experienced or is experiencing trauma.					
I am knowledgeable about the effects of trauma on learning.					
I am knowledgeable about the effects of trauma on student behaviors.					
I am knowledgeable about the effects of trauma on student's academic success.					
I am knowledgeable regarding how faculty may inadvertently re-traumatize students.					
I am comfortable in my ability to support students who have experienced or are experiencing trauma.					

Sex: _____

Race: _____

Age: _____

Do you now or have you previously worked in K-12 education? _____

What subjects do you tutor? _____

Are you a strategy tutor or a content tutor? _____

APPENDIX B

TRAUMA-INFORMED CARE IN ACADEMIC ATHLETICS SURVEY (TIC-AAS)

	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly Agree 5
I am familiar with the term trauma-informed care.					
I recognize sexual abuse as a form of trauma.					
I recognize physical abuse as a form of trauma.					
I recognize emotional abuse as a form of trauma.					
I am familiar that exposure to drug abuse, domestic violence, criminal activity, and mental illness as a form of trauma.					
I am familiar with the effects of trauma on an individual's overall health and social well-being.					

I can identify student behaviors that may be indicative of someone who has experienced or is experiencing trauma.					
I am knowledgeable about the effects of trauma on learning.					
I am knowledgeable about the effects of trauma on student behaviors.					
I am knowledgeable about the effects of trauma on student's academic success.					
I am knowledgeable regarding how faculty may inadvertently re-traumatize students.					
I am comfortable in my ability to support students who have experienced or are experiencing trauma.					

APPENDIX C

IRB APPROVAL LETTER



December 1, 2021

Kimberly Daniels
Educational Studies in Psychology, Research Methodology and Counseling
College of Arts and Sciences
The University of Alabama
Box 870348

Re: IRB # 21-10-5116 "Can a Single One-Hour Professional Development Increase Trauma-Awareness in Academic-Athletic Tutors at a D1 University"

Dear Mrs. Kimberly Daniels:

The University of Alabama Institutional Review Board has granted approval for your proposed research. Your protocol has been given exempt approval according to 45 CFR part 46.104(d)(2) as outlined below:

(2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

The approval for your application will lapse on November 30, 2022. If your research will continue beyond this date, please submit the annual report to the IRB as required by university policy before the lapse. Please note, any modifications made in research design, methodology, or procedures must be submitted to and approved by the IRB before implementation. Please submit a final report form when the study is complete.

Please use reproductions of the IRB approved informed consent form to obtain consent from your participants.

Good luck with your research.

Sincerely,

A black rectangular redaction box covering the signature area of the letter.