

# Is it Hard Out Here for a Player?: Understanding the Relationship Between Adverse Childhood Experiences and Athletic Identity Among College Student Athletes

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It is unclear what impact, if any, early experiences with trauma may have on athletic identity. Athletic identity may serve as a protective shield for those who have adverse childhood experiences. Self-identifying as an athlete as opposed to the identity that experienced the trauma could be a defense mechanism for self-protection. The primary purpose of this exploratory study was to investigate the relationship between adverse childhood experiences and athletic identity as well as determine any influence from gender, ethnicity, and sport in a group of college athletes. Using Qualtrics software, 102 collegiate athletes currently enrolled in higher education institutions across varying NCAA divisions within the United States completed three measures: Personal Data Form, Athletic Identity Measurement Scale (AIMS), and Adverse Childhood Experiences Survey (ACES). Results found adverse childhood experiences were not significantly associated with Athletic Identity. However, results did show a difference between men and women, with a significant relationship between adverse childhood experiences and athletic identity in men but not women. Upon further examination, it was found that for men, consideration of ethnicity in conjunction with gender highlighted an even stronger relationship among Black men specifically. Implications for these findings, suggestions for university athletic departments, and recommendations for future research were made.



Trauma is a relatively recent concept with Post Traumatic Stress Disorder (PTSD) only being recognized by the American Psychiatric Association in 1980 (Friedman, 2013). One of the features of PTSD is a loss of a stable sense of self and connection to others, both of which are critical to identity development (Kirshner, 2015). When individuals experience trauma at a young age, their identity development may be affected throughout their lives. According to Erik Erikson (1968), adolescence is a pivotal time in identity formation. If the trauma happens at or especially before adolescence, it may influence how individuals view themselves and their identity.

Research has shown identity formation is important for athletes at all participation levels (Miller & Kerr, 2003). Both self-perception and social support are critical to athletic identity (Schutte & McNeil, 2015). However, the links between childhood trauma and athletic identity in high performing athletes has not been adequately researched. It is critical to understand the long-term effects of trauma not just on athletes' bodies, but also on their psychological development, identity, and self-concept. The study of early childhood traumatic stressors has been linked to numerous clinical, health, and social problems across the life span (Felitti et al., 1998). The number of categories of adverse childhood exposures showed a relationship to adult diseases including ischemic heart disease, cancer, chronic lung disease, skeletal fractures, liver disease, and multiple categories of childhood exposure were likely to have multiple health risk factors later in life (Felitti et al., 1998). However, understanding the impact of Adverse Childhood Experiences (ACEs) on athletes requires further examination of other key variables significant to the success of athletes. One such variable is athletic identity which has been heavily researched. While the impact of trauma-related disorders carries considerable risk and morbidity, early identification and treatment can mitigate those negative effects (Rothbaum et al., 2012). Trauma experience may influence athletic identity. Filling this research gap can help create more practical recommendations for larger systems, such as athletic departments at colleges and universities, to help facilitate healthy identity development among athletes who have experienced trauma early in life.

## **Purpose of the Study**

Athletic identity may serve as protection for those who have exposure to adverse childhood experiences. Self-identifying as an athlete as opposed to the identity that experienced the trauma may be a helpful defense mechanism that individuals can use to protect themselves psychologically. One of the features of PTSD is a loss of a stable sense of self and connection to others, both of which are critical to identity development (Kirshner, 2015). If individuals experience trauma at an early age, it may impact their identity development as they move forward. So, if the trauma happens at or especially before adolescence, it could shape how individuals view themselves. The primary purpose of this study was to directly investigate if there is any relationship between childhood trauma experiences and athletic identity among college level athletes. This study also furthers our understanding of the connections found among various demographic categories and levels of childhood trauma experiences

and athletic identity. There are two important research questions to be answered by this study: 1) What is the relationship between childhood traumatic experiences and athletic identity among college athletes? and 2) Does ethnicity, gender, or sport have moderating effects on this relationship?

## Literature Review

### Athletic Identity

Athletes commonly base their identities on their experiences with sport and often derive self-fulfillment from the successful assumption of an athletic role. Athletic identity is also closely related to the amount of time and effort dedicated to sport activity by individuals and is based on the degree of importance, strength, and exclusivity attributed to one's role as an athlete (Brewer et al., 1993). Foundational work offered by Brewer et al. (1993) provides the groundwork for the concept of athletic identity and how to measure it. Without this foundational research we would not have an understanding of the athletic role in identity development or be able to adequately measure it.

Without the opportunities to explore and create an identity of their own, identity can become enmeshed with athleticism; where being an athlete becomes the individual's primary positionality, identity, and purpose. However, there are important positive attributes that correlate with high athletic identity including increased self-esteem, self-confidence, and elevated performance in their sport. Such outcomes are beneficial for athletes, especially while they are still performing (Tušak et al., 2005). Unfortunately, high athletic identity among some athletes may overtake their identity as individuals. They spend so much time dedicated to the game, that it becomes their only focus, with other aspects of their lives also revolving around the sport. This is exacerbated when their time, diet, body image, social networks, and lifestyle are controlled by their sport. Athletes also have their time dictated by practices, games, workouts, athletic training sessions, or meetings. Lemmons (2019) suggests this is detrimental when athletes are unable to explore interests and abilities, preventing them from preparing for life after sports. It is critical to analyze how athletes view and define themselves as individuals, as athletic identity is a foundational part of who athletes are.

### Childhood Trauma

Childhood trauma is often understood through examination of Adverse Childhood Experiences (ACEs) from the CDC-Kaiser Permanente Adverse Childhood Experiences Study which investigated childhood abuse, neglect, and challenges and their impact on health and well-being later in life. This study examined all types of abuse, neglect, and other potentially traumatic experiences that may occur to individuals under the age of 18 (Felitti et al., 1998). The National Institute of Mental Health (2022) defines a traumatic event as a shocking, scary, or dangerous experience that affects someone emotionally. Individuals who experienced four or more categories of childhood exposure, compared to those who had experienced none, had increased

health risks for alcoholism, drug abuse, depression, and suicide attempt; an increase in smoking, poor self-rated health, and sexually transmitted disease; and an increase in physical inactivity and severe obesity (Anda, 2007; Anda et al., 2008; Brown et al., 2009; Felitti et al., 1998). The wide impact of these adversities has caused childhood trauma to be viewed as a public health concern (Anda et al., 2010). ACEs have been associated with higher risk for suicide, substance abuse, mental illness, sexually transmitted infections, teen pregnancy, cigarette smoking, and obesity in adulthood (Bellis et al., 2013; Felitti et al., 1998; Hillis et al., 2004). While ACEs are prevalent across all demographic groups, some populations experience a more vulnerable, unequal burden of exposure to ACEs because of the social and economic conditions in which they live, learn, work, or play (Merrick et al., 2018; Wade et al., 2014; Wolff et al., 2018). Research has shown those who identified as Black, Latinx, or multiracial, those with less than a high school education, those with annual income under \$15,000, those who were unemployed or unable to work, and those identifying as Gay/Lesbian/Bisexual reported significantly higher exposure to adverse childhood experiences than comparison groups (Merrick et al., 2018). Elite athletes experience a higher risk of mental disorders relative to the general population; specifically, in diagnoses such as anxiety, depression, and alcohol use disorders (Gouttebauge et al., 2019; Purcell et al., 2019; Rice et al., 2016). Elite athletes may have increased rates of trauma-related symptoms and disorders compared with the general population; commonly developing coping strategies that may be adaptive in the setting of trauma, but may also mask trauma-related symptoms, making trauma-related disorders more difficult to detect (Aron et al., 2019; Bateman & Morgan, 2019.).

### **Elite Athletes and Traumatic Experiences**

There has been an exploration of adversity among elite athletes suggesting talent needs trauma; or potential can benefit from, or even need, challenges for eventual performance (Collins & MacNamara, 2012). A number of models have been developed including a functional descriptive model (FDM) of posttraumatic growth (Calhoun et al., 2010; Calhoun & Tedeschi, 1998; Tedeschi & Calhoun, 1995, 2004; Collins et al., 2016) and an organismic valuing theory of growth through adversity (Joseph & Linley, 2005). A more recent theoretical development in this area is the Affective-Cognitive Processing Model (ACPM) of posttraumatic growth (Joseph et al., 2012). This final model is based on posttraumatic growth occurring at an optimal point where there has been enough stress to challenge one's fundamental assumptions, but not so much stress that an individual is unable to cognitively process or cope with the stress (Howells & Fletcher, 2015). It may not be the trauma itself that creates elite athletes; but rather what the athlete brings to and takes away from those experiences, along with a supportive sport environment (Allan, 2018; Savage et al., 2017). Exposure to trauma does not necessarily differentiate the best elite athletes from other elite athletes; rather it is athletes' innate psychological skills and the ability to learn from their experiences that may set them apart (Collins & MacNamara, 2012). A study of 16 Great Britian Olympic champions compared medalists against 16 non-medaling Olympians. All medalists exposed to trauma as children, such as

parental death or divorce, physical and verbal abuse, or an unstable home environment, were compared to non-medalists. Content analyses found no differences between super-elite and elite athletes in family values, conscientiousness, or commitment to training. But the two groups were found to be different with regard to the experience of a foundational negative life event coupled with a foundational positive sport-related event, the experience of a career turning point that enhanced motivation and focus for their sport, need for success, obsessiveness and/or perfectionism with regard to training and performance, ruthlessness and/or selfishness in the pursuit of their sporting goals, dual focus on both mastery and outcome, the use of counterphobic attitudes and/or total preparation to maintain higher levels of performance under pressure, and the relative importance of sport over other aspects of life (Hardy et al., 2017). In a study of performers and athletes, those with high ACEs displayed more dissociative processing, representative of both dissociative absorption and pathological dissociative processing such as depersonalization, dissociative amnesia, and identity confusion; as well as reporting significant levels of internalized shame, and trait anxiety (Thomson & Jaque, 2019). From this perspective, athletes may search for meaning in their adversity, which may help them develop an edge over their competition (Tamminen et al., 2013; Fletcher & Sarkar, 2012).

Athletes may use dissociation to focus their attention and distract them from painful feelings. Dissociation is a psychological defense mechanism associated with trauma, which sets the traumatic memory apart from consciousness (Leahy, 2011). A study conducted with Olympic swimmers revealed those who had experienced traumatic adversities developed multiple identities (Howells & Fletcher, 2015). Dissociation may provide protective detachment from overwhelming impacts, but it may also result in disruption with the integrated functions of consciousness, memory, identity, or perception of environment (Van der Kolk et al., 1996). This coping strategy may build resilience but impair well-being in the long-term. There have been gender differences found in use of dissociative strategies, suggesting women are more apt to avoid pain compared to men, who may view tolerance of pain as representing strength and endurance (Philippe & Seiler, 2005). Female athletes are more likely to be diagnosed with psychological problems than men and appear more susceptible to difficulties encountered in their environment (Schaal et al., 2011). Analyses disaggregated by gender suggest the social context of abuse may be different for men and women (Leahy et al., 2008).

Although these studies provided evidence linking trauma for elite athletes, more research is needed to empirically support the impact of trauma on collegiate athletes. Given the lack of research linking athletic identity and childhood trauma, it is unclear what impact, if any, early experiences with trauma may have on athletic identity. Since both self-perception and social support are critical to athletic identity (Schutte & McNeil, 2015) and impacted by traumatic experiences (Lanius et al., 2020), there are valid reasons to examine whether trauma influences athletic identity development.

## Theoretical Framework: Social Identity Theory

Social Identity Theory is an exploration of the interplay between personal and social identities (Tajfel & Turner, 1979). This theory analyzes the role of self-concept in group membership, group processes, and intergroup relations embracing interrelated concepts that focus on social-cognitive, motivational, social-interactive, and macrosocial facts of group life (Hogg, 2018). The theory further proposes that people strive to achieve or maintain a positive social identity, boosting their self-esteem, and this positive identity derives from favorable comparisons that can be made between ingroup and relevant outgroups. Further, with an unsatisfactory identity, people may seek to leave their identified role or find ways of achieving more positive associations for it (Brown, 2000). In relation to this study, this theory may explain why in the presence of more traumatic childhood experiences, individuals align themselves with their athletic identity role to serve as a protective effort and social identity desirability. This occurs through a social comparison process (Stets & Burke, 2000). In early work, Hogg and Abrams (1988) assert individuals place themselves in social categories as parts of a structured society and exist only in relation to other contrasting categories where each has more or less power, prestige, or status. Ultimately, an athletic identity may hold more power than the identity role that experienced the trauma.

## Method

### Measures

Participants completed three measures as part of this study: Personal Data Form (PDF), Athletic Identity Measurement Scale (AIMS), and Adverse Childhood Experiences Survey (ACES). The first author developed the PDF, which collected information on the participant's practiced sport, gender, age, and race.

### *Athletic Identity Measurement Scale (AIMS)*

Athletic identity was measured with the Athletic Identity Measurement Scale (AIMS; Brewer *et al.*, 1993). There are other scales related to athletic identity, but AIMS is the most widely accepted (Proios, 2013). The measure is a 10-item questionnaire utilizing a Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree) which yields a potential score ranging from 10-70. To score the questionnaire, the points are totaled for a score that represents their athletic identity. A study with a sample of 332 Division III student-athletes found an average Athletic Identity score of 48.24 out of 70 (Stokowski *et al.*, 2022). The AIMS originally measured three factors of athletic identity: exclusivity, social identity, and negative affectivity. The exclusivity subscale measures the degree to which an individual's self-worth is established through participating in the athletic role. The social identity subscale measures the degree to which an individual views themselves as assuming the role of an athlete. The negative affectivity subscale measures the degree to which individuals experiences negative emotion due to unwanted sporting outcomes (Pro-

ios, 2013). However, self-identity has also been considered as the fourth factor of the AIMS questionnaire (Martin et al., 1997). The AIMS questionnaire demonstrates high test-retest reliability and internal consistency (Brewer et al., 1993). The internal consistency of the AIMS is  $\alpha = .76$  (Visek et al., 2008) which is an acceptable level of internal consistency.

### ***Adverse Childhood Experiences Survey (ACES)***

The Adverse Childhood Experiences Survey measures childhood trauma experiences (Felitti et al., 1998). The ACES survey originally explored seven negative life experiences including physical abuse, sexual abuse, psychological abuse, household substance abuse, household mental illness, witnessing violence towards one's mother, and history of incarceration within the household; but this has since been expanded to include parental separation or divorce, physical neglect, and emotional neglect (Burke et al., 2011; Dong et al., 2004; Felitti & Anda 2010). The 10-item questionnaire assesses 10 types of childhood trauma measured in the ACE study. Five are personal acts experienced by the respondent: physical abuse, verbal abuse, sexual abuse, physical neglect, and emotional neglect and an additional five are related to other family members: a parent who's an alcoholic, a mother who's a victim of domestic violence, a family member in jail, a family member diagnosed with a mental illness, and the disappearance of a parent through divorce, death or abandonment (Burke et al., 2011; Dong et al., 2004; Felitti & Anda, 2010). Each affirmative answer is assigned one point. To score the questionnaire, the points are totaled for a total ACE score. Each type of trauma counts as one, no matter how many times it has been experienced. ACES is a reliable and valid assessment with a strong internal consistency of  $\alpha = .88$  (Murphy et al., 2013).

### **Procedures**

Recruitment strategies included using athletic division email listservs and social media. Athletic departments from various NCAA conferences were emailed requesting the survey be forwarded to their student athlete listserv. A recruitment flyer was shared on related social media pages. The survey was conducted using Qualtrics software and began with a brief description of the study, instructions on how to complete it, and participants were made aware that they could stop at any time. Next, there was an informed consent form where participants were asked to acknowledge they read the description of the study, were over the age of 18, and agreed to the terms of the study. No identifying information about the student-athletes or their institutions were collected and there were no incentives offered for completion of the survey by the researcher. The data collected is password protected and maintained by the researcher.

### **Participants**

This sample included 122 collegiate athletes currently enrolled in higher education institutions across varying NCAA divisions within the United States. Of the 122 surveys collected, 20 (16.4%) were excluded from the analysis due to missing data.

Of the numerous sports sanctioned by the NCAA, only seventeen categories of sport were included in the study to clearly analyze the variances that exist between the most represented collegiate sports. Individuals who could not speak/read English or were over the age of twenty-five were excluded from the study, as older students may have already experienced life transitions that may affect their athletic identity. Participant demographics can be seen in Table 1. Of the participants, 70 (68.6%) were women, 31 (30.4%) were men, and 1 (1%) was identified as nonbinary/trans. The racial ethnic identity of the sample was primarily White, with 68 (66.7%) participants identifying as White, 22(21.6%) as Black, 1 (1%) as Asian, 5 (4.9%) Pacific Islander, 3 (2.9%) Native American, and 3 (2.9%) as Latinx. Twelve collegiate sports were represented including 18 (17.6%) of the athletes were on teams from track and field/cross country, 18 (17.6%) from soccer, 17 (16.7%) from football, 11 (10.8%) from baseball/softball, 9 (8.8%) from tennis, 9 (8.8%) from volleyball, 8 (7.8%) from wrestling, 5 (4.9%) from basketball, and 3 (2.9%) from swimming/diving. There was 1 (2.9%) athlete from each sport of lacrosse, gymnastics, and hockey. The athletes' ages ranged from 18 to 23, with a mean age of 20.12 years.

## Results

Descriptive statistics of all study variables were first run to assess for normality using SPSS Statistical Software. Means (SDs) and bivariate correlations were computed for the two primary study variables. Descriptive statistics of the measures can be seen in Table 2. In this sample of 102 student athletes, the lowest ACES score was 0, maximum score was 8, with a mean score of 1.33. This is aligned with the national averages with fifty seven percent (57.8%) of people in America having an ACE Score of at least 1 (Giano et al., 2020). The lowest AIMS score was 28, maximum score was 70 and a mean of 53.91.

### Research question 1

To assess the first research question regarding athletic identity and adverse childhood experiences, a Pearson's correlation was completed at a .05 level of significance. Adverse Childhood Experiences were not significantly associated with athletic identity. The correlation between ACES and AIMS indicated there was no significant relationship between the two variables at  $r(95) = .184, p = .064$ .

### Research question 2

A Pearson's correlation was completed at a .05 level of significance. Scores on the AIMS and ACE assessments were correlated variables controlling for age, gender, race, and sport type. The results showed when controlling for age, gender, race, and sport type, the AIMS and ACE scores were significantly correlated,  $r(95), .207, p = .042$ . When examining the controlled variables, only gender was significantly correlated with the measures. Therefore, the data were split by gender to determine if the pattern of significance was different based on this variable. Only one partici-



**Table 1.** *Participants Demographic information*

<b>Individual Variables</b>	<b>N</b>	<b>Percent (%)</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Age</b>	102		20.1	1.5
<b>Gender</b>				
Male	31	30.4		
Female	70	68.6		
Non-Binary/Trans	1	1		
<b>Ethnicity</b>				
White	68	66.7		
Black	22	21.6		
Asian	1	1		
Pacific Islander	5	4.9		
Native American	3	2.9		
Latinx	3	2.9		
<b>Sport</b>				
Track & Field/Cross Country	18	17.6		
Soccer	18	17.6		
Football	17	16.7		
Baseball/Softball	11	10.8		
Tennis	9	8.8		
Volleyball	9	8.8		
Wrestling	8	7.8		
Basketball	5	4.9		
Swimming/Diving	3	2.9		
Lacrosse	1	.97		
Gymnastics	1	.97		
Hockey	1	.97		

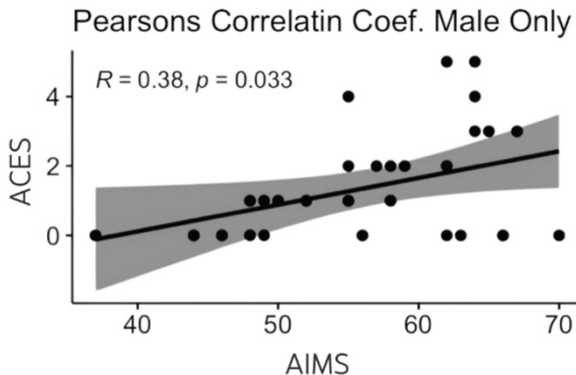
**Table 2.** *Descriptive statistics for ACES and AIMS measures*

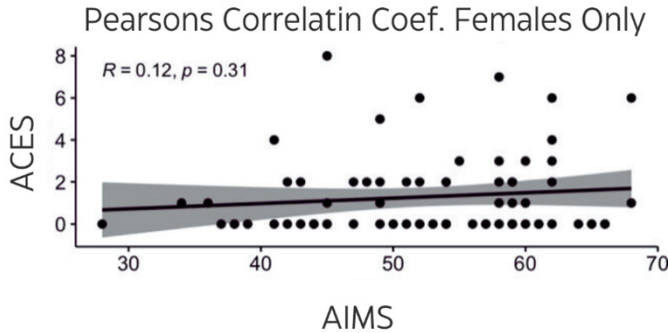
<b>Measure</b>	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>ACES</b>	102	0	8	1.33	1.804
<b>AIMS</b>	102	28	70	53.91	8.899

participant identified as non-binary/trans, so they were removed from the study due to lack of power for this level of gender variable. The two genders examined were women and men. Data was analyzed using a predictive regression model with AIMS and gender as the predictor variables and scores on the ACE as the criterion variable. Data were also evaluated by gender for scores on the AIMS and ACE using an independent-samples t-test to determine differences by gender. All results were analyzed at a .05 level of significance. Results showed the overall model was not significant,  $F(2, 99) = 1.882, p = .1658$  (SOE = 1.778,  $R^2 = .04$ ). However, when evaluating the independent contribution of each predictor variable, scores on the AIMS were significantly predictive of scores on the ACE ( $\beta = .199, p = .05$ ), whereas gender was not significant ( $\beta = -.519, p = .61$ ). The results suggest scores on the AIMS are a significant predictor of ACE scores regardless of gender. To evaluate the gender variable further, an independent-samples t-test was conducted. The results with ACE as the dependent variable failed to show significance,  $t(99) = -0.268, p = .79, d = -0.06$ , suggesting ACE scores do not differ by gender. However, with scores on the AIMS as the dependent variable, the results did reach significance,  $t(99) = -2.430, p = .01, d = -0.52$ , showing AIMS scores were significantly higher for men ( $M = 56.94, SD = 7.81$ ) than for women ( $M = 52.40, SD = 1.08$ ).

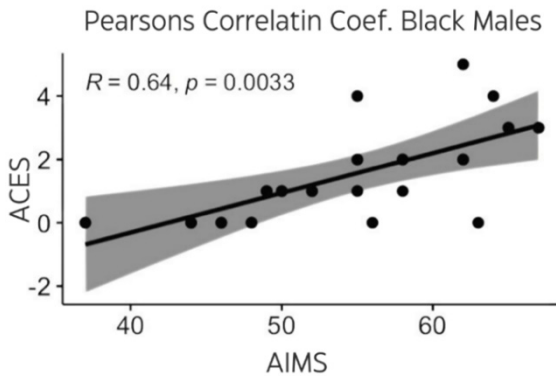
While there was not a significant relationship between those two variables, this notable significant interaction is worth exploring. Results showed there was a difference between men and women with a significant relationship between adverse childhood experiences and athletic identity in men but not women. This relationship among men is found in Figure 1 and women in Figure 2.

**Figure 1**



**Figure 2**

Upon further disaggregation, it was found among men, consideration of ethnicity in conjunction with gender highlighted an even stronger relationship within Black men specifically. This relationship is shown in Figure 3.

**Figure 3**

## Discussion

The main objective of the present study was to investigate the relationship between adverse childhood experiences and athletic identity as well as determine any influence from gender, ethnicity, and sport in a group of college athletes. The results suggested there was no significant relationship between adverse childhood experiences and athletic identity. While there are not studies exploring the relationship between these two specific variables, Sarkar, Fletcher, and Brown (2015) suggest adversity-related experiences may be vital in the psychological and performance development of Olympic champions. What was missing in connecting the findings to

the literature is this study's lack of exploration of growth opportunities. According to the literature on the Posttraumatic Growth Model, constructive cognitive processing is connected with the adverse experience necessary for growth to occur (Calhoun et al., 2010; Calhoun & Tedeschi, 1998; Tedeschi & Calhoun, 2004; Sarkar et al., 2015). Content analyses in a study with Olympic medalists revealed elite performing athletes possessed the experience of a foundational negative life event coupled with a foundational positive sport-related event (Hardy et al., 2017). This suggests it is not adversity alone, which is confirmed in this study's findings, but adversity partnered with a constructive corrective experience that impacts the psychological development of athletes. Also, in comparing professional athlete identity to collegiate athletes, some professional athletes are able to achieve excellence while sustaining a multidimensional life story and identity by overt resistance or covertly manipulating their public stories and actions, which becomes easier as they grow in age, maturity, and naturally develop multiple identity roles (Brewer et al., 1993; Carless & Douglas, 2013; Miller & Kerr, 2003). Contrary to the previous findings in the literature, this study does not support a significant relationship between adverse childhood experiences and athletic identity. This demonstrated the need to disaggregate data further based on other demographic categories (i.e., race and gender). After doing so, researchers found a significant correlation specific to Black male athletes. This provides meaningful evidence to support that Black males who have experienced a higher number of adverse childhood experiences also have a stronger athletic identity.

It is important to understand the gender differences highlighted in this exploratory study. A recent study conducted with 250 college athletes utilizing the AIMS questionnaire found athletic identity was higher in men than women for total scores as well as all subscales, with a statistically significant difference found in the social identity subscale (Rajan & Varma, 2022). The social identity subscale measures the degree to which individuals view themselves as assuming the role of an athlete (Proios, 2013). Cultural socialization, biological differences, and gender stereotyping may influence women's perceived role as athletes amongst other roles they may assume (Vealy & Chase, 2016). Despite having lower levels of athletic identity, female athletes have higher levels of anxiety and depression symptoms than male athletes (Antoniak et al., 2022). Conformity to traditional masculine norms is influenced by athletic identity, with sport representing "an influential institution of masculinity socialization that impacts the psychosocial development of many men in American society (Steinfeldt & Steinfeldt, 2012, p. 115)." In addition, male athletes are less willing to seek mental health treatment, especially those who ascribe to hegemonic notions of masculinity (Moreland et al., 2018). According to Social Identity Theory, men demonstrate a stronger link between masculinity and the avoidance of psychological help seeking relative to women, because their in-group social identity status is connected to the demonstration of masculine ascribed behavior (Heath, 2019). These factors may allow athletic identity to uniquely serve as a buffer for adverse experiences for men in a way that it cannot for women.

Examining the impact of race or ethnicity among male athletes also requires examination. The combination of historical-systemic, community, intergenerational, and personal trauma exposure may impact African Americans' stress-related biology and approach to coping and render them more vulnerable to long-term effects of ACEs (Hampton-Anderson et al., 2021). Results from a study by Curtis et al. (2021) supported the idea of masculinity ideology serving as a mechanism for coping with stressful, harsh environments. They also found Black men who experienced ACEs were more likely to endorse forms of masculinity associated with risky or aggressive behaviors, suggesting this as compensation for contextual factors limiting their ability to engage in higher education. This could also imply adoption of athletic identity as a form of masculinity could be a compensatory safeguard for coping that does not limit ability to engage in higher education but may advance their opportunities. African American men may perceive they derive certain tangible and intangible benefits from participating in athletic programs (Singer, 2008). Literature centering Black men and athletic identity, proposes that African American male athletes are more likely than White male athletes to view sports as the focal point of their lives and believe others view them only as athletes (Beamon, 2012; Harrison et al., 2011; Murphy et al., 1996; Scales, 1991). In alignment with Social Identity Theory, higher athletic identity could serve as a protective factor for Black males who have experienced multiple adverse childhood experiences as a resiliency and resistance strategy as a result of the unique intersectionality of Black male collegiate athletes and their perceptions of identities that possess power in society.

## Implications

According to the National Collegiate Athletic Association (NCAA), in 2021 the number of student athletes reached to over 520,000 (NCAA, 2022). With a growing number of student athletes entering college, the level of mental health concerns is likely to increase. Growing numbers of college student-athletes are reporting significant mental health issues, including depression. Gardiner (2006) found that somewhere between 10 and 20 percent of college student-athletes experienced depression, whereas Maniar, Chamberlain, and Moore (2005) found student-athletes experienced depression more often than their non-student-athlete peers. It is vital for athletic staff and professionals to be aware of the potential relationships among adverse childhood experiences (ACEs) and an athlete's vulnerabilities, which might encourage the use of screening to better diagnose and manage their symptoms. Data is sparse regarding whether student-athletes are screened for PTSD, however, relatively high rates of PTSD in this population may warrant routine screening for trauma related symptomatology (Aron et al., 2019). Such actions could minimize the negative symptomatology resulting from cumulative childhood trauma (Cloitre et al., 2009). This information can also provide more practical recommendations to larger systems such as athletic departments to help facilitate healthy identity across all sports and groups of athletes. While general guidelines exist for the treatment of trauma related disorders, treatment, and screening protocols specific to elite athletes have yet to be established and implemented (Aron et al., 2019).

Assessment for athletic identity can also be beneficial for athletic programs to better serve athletes. Strength of athletic identity is a consistent predictor of emotional adjustment to career termination across different kinds of sport and performance (Kuettel et al., 2017; Ronkainen et al., 2016; Willard & Lavalley, 2016). One framework born from research with student-athletes is the Positive Transitions Model (Stankovich et al., 2001). Developed at a Division I university, the model has three components: identity development, athletic transferable skills, and career exploration. The course includes (identity development) exploring values, personality, and interests; (athletic transferable skills) goal setting and communication and decision-making skills; and (career exploration) professional networking, informational interviewing, resumé writing, and job interviewing. Evaluation of the model has shown it to be effective in transitioning students with extremely high athletic identity into more positive ranges of athletic identity (Stankovich, 1998). This reduction in or rebalancing of athletic identity may be helpful for athletes because it helps them begin to explore their career options, rather than holding onto their athletic identity and being reluctant to separate from the sporting space. The descent of athletic identity allows student athletes to invest in other roles (Lally & Kerr, 2005). Related to the current study, this provides opportunities for expanding identity development in racialized gender groups that may be at risk for difficult transition out of sport.

Student athlete long-term well-being could be promoted with interventions tailored to individual level of athletic identity. Athletic departments may want to consider allocating resources and programming specifically designed to meet the needs of student-athletes annually to prepare all athletes for life after college athletics by assisting in the development of a multidisciplinary athletic staff to promote student athlete self-identity (U'Ren, 2017) as well as designing effective mental health interventions (Watson, 2005). With screening information obtained, efforts could be designed to target high risk students. Those students with high athletic identity and high adverse childhood experiences could be offered additional outreach experiences promoting mental health and coping skills programing, job shadowing opportunities in relevant career fields, community engagement experiences, and scheduled check-ins with academic advisors. In alignment with social identity theory, these self-enhancement actions could influence the student's group commitment and self-identity (Ellemers et al., 2002). These efforts would all be with the goal of creating safe opportunities to promote identity exploration. Professionals trained in trauma-informed mental health practice could assist athletes in developing skills and engaging in constructive corrective experiences to cope with challenges as a part of a multidisciplinary athletic staff (Bennett, 2022, 2023). While college athletes are less comfortable seeking counseling services than other academic or athletic resources, especially Division I athletes (Moore, 2016), Daltry et al. (2023) suggests if athletes, athletic personnel, and coaches feel understood and counselors are knowledgeable about athletic culture, they may be more likely to refer to and seek out mental health services. Building a supportive trusting environment helps staff and athletes.

## Limitations and Future Research

The limitations of the study included the self-report nature of the measures and potential social desirability bias. Even with measures to ensure anonymity, self-reported data of this kind can be problematic due to the sensitive nature of the questions (Gnambs & Kaspar, 2015). The most pronounced limitation of this study was the sample size. The small sample size posed a power problem and inhibited further analysis. Also, support systems, social connections, years in sports, opportunities in playing, and other external factors were not accounted for in this study. These factors could potentially play a role in the measured interactions, rendering different responses if investigated.

Future research could also include information on the current wellbeing of student athletes, as well as ACEs and AIMS. Further research on the relationship between trauma and identity has the potential to inform prevention and intervention efforts aimed at reducing the negative effects of traumatic experience and increase positive growth effects (Berman, 2016). Researchers may choose to further explore the social construct of gender and its influence on the relationship between ACES and AIMS through examining how male athletes use sports to distance themselves from adverse childhood experiences by focusing on their athletic identity. In researching male athletes, research could explore what makes men believe sports can be a safe space and buffer for those with adverse childhood experiences. Specifically with Black men, identity and positionality can be explored qualitatively to amplify the voices and experiences of the student athletes. Howe (2023) found the experiences and perceptions of identity among Black male college athletes differs depending on context, socialization, societal assumptions, and a consciousness or understanding of multiple social identities; and proposes that athletic department officials, institutions of higher education, and scholars can benefit from increased understanding of Black male college athlete identity to better support them. More information is needed on why this might not be true for female athletes or how gender roles impact them in unique ways. Utilizing alternative methodologies such as focus groups or qualitative interviews would be a way to examine any connections between adverse childhood experiences and athletic identity. Additionally, longitudinal studies that examined athletic identity and adverse childhood experiences over time might provide fruitful information.

## Conclusion

The present exploratory study investigated the relationship between adverse childhood experiences and athletic identity and analyzed influence from gender, ethnicity, and sport in 102 NCAA collegiate athletes currently enrolled in higher education institutions within the United States between the ages of 18 and 23 using the Athletic Identity Measurement Scale (AIMS), and Adverse Childhood Experiences Survey (ACES). We found adverse childhood experiences were not significantly associated with athletic identity, adverse childhood experiences and athletic identity

had a significant relationship in men but not women, and an even stronger relationship between the two variables within Black men specifically. Findings highlighted the literature's position that it is not adversity alone that impacts the psychological development of athletes. Assessment for ACEs and athletic identity can be beneficial for athletic programs to better serve athletes. University athletic departments may also employ a multidisciplinary staff to assist student athletes' development holistically. Future research could utilize alternative methodologies, examine mental resilience in Black male athletes, and explore how social constructs impact student athletes, to inform prevention and intervention efforts with these populations.

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