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Athletic Identity and Psychological Distress:

The Moderating Roles of Social Support and Self-Compassion

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Despite research having examined athletic identity (AI) and psychological outcomes, few studies have fully considered how the effects of AI may be moderated by race/ethnicity, gender, social support, and self-compassion. College athletes (N = 4,116; Mage = 19.84; women = 66.9%; White = 78.2%) participated from mid-April to mid-May 2020 in the immediate aftermath of the COVID-19 pandemic and the cancellation of collegiate sports. Through a three-way ANOVA, we found a significant gender by race interaction; Black men reporting stronger AIs compared to White male and female athletes. Through a series of regression analyses, we found that when self-compassion and social support were low, AI was related to more psychological distress for the White women. There were also significant compassion by support interactions for the Black women and White men; psychological distress was highest when SS and SC were low. During times of transition, when AI may be disrupted, athletes' self-compassion and social support may help ameliorate the otherwise negative effects on psychological well-being that would be expected. Thus, sports medicine professionals might focus on helping their athletes develop these psychological resources.

Keywords: race/ethnicity, gender, competition level, COVID-19, global pandemic, psychosocial resources, collegiate athletes

In March 2020, with the declaration of a global pandemic (i.e., COVID-19) and the cancellation of all collegiate sports, the sport careers and lives of all collegiate athletes were disrupted. Similar to what happens in response to serious sport injuries (e.g., torn ACL), collegiate athletes had to suddenly, and immediately, stop participating in the activities that defined who they were and in which they spent most of their time (Lopes Dos Santos et al., 2020). This abrupt, and instant, shut-down of collegiate sports caused a disruption to their athletic role and, for those with strong, exclusive athletic identities, increased the risk factor of experiencing psychological distress (e.g., depression, anxiety; Brewer, 1993; Graupensperger et al., 2020). Whether, and to what extent, this risk was realized, however, would depend on the athletes' psychosocial resources (e.g., social support), as well as their race/ethnicity and gender (Graupensperger et al., 2020; Malinauskas, 2010).

Athletic identity is defined by how strongly and exclusively athletes identify with this role (Brewer et al., 1993), and may be influenced by the competition level at which they play their sport, their gender, and their race/ethnicity (Eastman & Billings, 2000; Steinfeldt et al., 2010). Within United States collegiate sports, competition level is often conceptualized broadly across the National Collegiate Athletic Association's (NCAA) Divisional levels. Athletes who compete at the Division I (DI) and Division II (DII) levels generally receive sport scholarships (Division III athletes do not; NCAA, 2020a), and are expected to spend considerably more time within their sport and athlete roles. Thus, DI and DII athletes may be viewed, by their families, friends, coaches, and teammates, through the lens of sport and primarily respected (and accepted) for their sport-related abilities and status. In support, Huml (2018) found that NCAA DI and DII athletes' athletic identities were similarly strong, and both higher than their DIII peers. Further, among DIII athletes, Stokowski et al. (2022) found that the athletic identity levels were only moderate, falling at the mid-point of the Athletic Identity Measurement Scale range of scores (AIMS; Brewer & Cornelius, 2001).

Historically, society in general, and individuals specifically (e.g., fans, media), have viewed and responded to men's and women's sport involvement differently. Men's involvement has long been viewed as consistent with male gender roles and norms and an acceptable (even valued) pursuit for them (Chalabaev et al., 2013). Female athletes, on the other hand, have not had such historical support for their involvement and have long fought to be fully accepted. Thus, within this historical context, male athletes would be expected to endorse a stronger identity than female athletes and initial research has supported this expectation (e.g., Brewer & Cornelius, 2001; Melendez, 2009; Mignano et al., 2006). Recently, however, as female athletes have continued to challenge gender stereotypes and social norms and roles, and fight for their place in sport (Haines et al., 2016), societal expectations about their involvement have changed and so has the strength of their athletic identities, becoming comparable to that of male athletes (Anthony & Swank, 2018; Chen et al., 2010; Huml et al., 2019).

Similar to gender, the relationship between race/ethnicity and athletic identity is strongly influenced by societal, familial, and individual expectations. Black/African-American individuals, particularly men, are socialized into sport through the media, friends, family, and the larger society (Beamon, 2012). Through the media, Black athletes often are praised for their physical abilities (e.g., athletic, powerful, physically "gifted"), whereas White athletes are celebrated more for their intellect and related characteristics (e.g., hard-work, mental skills, leadership, determination, being a team player; Eastman & Billings, 2001; Spaaij et al., 2015). Given these differences in societal expectations and perceptions, Black, more so than White, athletes may begin to view themselves primarily through the sport prism, which may be

intensified when they attend Predominantly White Institutions (PWIs, defined as institutions of higher learning that are historically White or White students account for 50% or more of the student population; Lomotey, 2010; Steinfeldt et al., 2010). Being a Black student-athlete, particularly at a PWI, is a "double-edge sword" in that they may be respected and valued for their athleticism but overlooked and disregarded in their other roles on campus (e.g., student; Huml et al., 2019; Melendez, 2009; Steinfeldt et al., 2010).

Although gender, race/ethnicity, and competition level are expected to influence the strength of athletes' identification with that role, research on these relationships has been limited and findings equivocal (e.g., Anthony & Swank, 2018; Chen et al., 2010; Harrison et al., 2011; Huml et al., 2019). For example, race/ethnicity has traditionally been conceptualized solely as White athletes versus Black athletes (e.g., Harrison et al., 2011; Steinfeldt et al., 2010). Further, the gender-athletic identity relationship has evolved, and few studies have examined the interplay of gender, race/ethnicity, and/or competition level (e.g., Brewer & Cornelius, 2001; Huml et al., 2019; Melendez, 2009). Thus, additional research is needed to provide a contemporary, and more nuanced, understanding of athletic identity in collegiate sport.

Athletic identity's salience lies in its potential to lead to positive and negative outcomes in athletes' lives (Brewer et al., 1993; Chen et al., 2010; Heird & Steinfeldt, 2013; Horton & Mack, 2000). On the positive side, athletes who identify strongly with their role may feel more confident and motivated, engage in performance-focused behaviors (e.g., extra practice sessions, improve physical health, leadership), and develop transferable skills (e.g., work-ethic, creativity, resiliency; Brewer et al., 1993; Chen et al., 2010; Horton & Mack, 2000). Additionally, those with a strong athletic identity will have a supportive network of other athletes, and have access to academic resources and opportunities (e.g., tutoring, career preparation; Chen et al., 2010). All of these may help athletes perform better in their sports (Harrison et al., 2011; Horton & Mack, 2000; Melendez, 2009). However, on the negative side, when athletes are highly engaged in sport-focused activities and behaviors (Heird & Steinfeldt, 2013), they may be less likely to explore other areas of interest or commit to other important identities (e.g., student), and may under perform in other important life areas (e.g., academics) and/or feel isolated and alone in relation to their non-sport social networks (Horton & Mack, 2000). Further, when athletes primarily engage in activities that continuously reinforce this identity, they are at-risk of identity foreclosure (Brewer & Petitpas, 2017) and the challenges that may arise from that. For example, when this identity is disrupted, such as when injured, retiring, or living through a global pandemic, foreclosed athletes are expected to be at increased risk for experiencing psychological distress (e.g., depression, anxiety; Brewer et al., 1993; Giannone et al., 2017). Yet, not all athletes will experience distress in such situations, which suggests that certain psychosocial resources may buffer the potentially adverse effects of a disrupted athletic identity.

Social support and self-compassion are empirically-validated psychosocial resources (e.g., MacBeth & Gumley, 2012; Marsh et al., 2018) that may assist athletes in effectively managing life stressors, such as the COVID-19 pandemic and disruption of their athletic identity. Social support is "the social resources that persons perceive to be available or that are actually provided to them by nonprofessionals in the context of both formal support groups and informal helping relationships" (Gottlieb & Bergen, 2010, p. 512). In the sport retirement and sport injury literature, where the effects of a disrupted athletic identity have been studied, social support has been found to lessen the psychological distress that athletes might otherwise experience (Brown et al., 2018; Lu & Hsu, 2013). Specific to the COVID-19 pandemic, Graupensperger et al. (2020) found that college athletes who felt more supported by, and connected to, their teammates prior to the pandemic experienced less dissolution of their athletic identity and better mental health, particularly fewer depressive symptoms, after its start.

Self-compassionate individuals are mindfully present, kind to themselves, and aware that they are connected to others and not alone in their suffering (Neff, 2003). During times of stress, failures, and disruptions, self-compassionate individuals are understanding and accepting of themselves, and connecting to others, whereas individuals with lower levels of self-compassion are more likely to engage in self-criticism and feel isolated from others (Neff, 2003). Research examining retired and injured athletes suggests that self-compassion helps them respond to their situations from a place of understanding and acceptance rather than from a place of criticism, lessening the experience of psychological distress (e.g., stress, depressive, and anxious symptoms) and increasing their well-being (e.g., Huysmans & Clement, 2017; Mosewich et al., 2011). Further, Mosewich et al. (2019) has argued for the broad adoption of self-compassion in sport, to help not only performances, but also improve athletes' psychological well-being. Although not yet examined in relation to athletic identity, like social support, self-compassion would be expected to buffer the relationship between this identity and psychological distress, particularly during times when the identity has been disrupted.

The COVID-19 pandemic disrupted the lives of every collegiate athlete at the same point in time. Regardless of gender, race/ethnicity, or NCAA Divisional level, all athletes' competitions and practices were suspended with no immediate information on when they could return to their campuses, to training and competing in their sports, and, ultimately, to their roles as athletes. With this abrupt cessation in collegiate sports, athletic identity became a salient factor through which to understand athletes' psychological reactions to the pandemic (Graupensperger et al., 2020; Hagiwara et al., 2021). Although athletic injury and sport retirement research has suggested that disruptions to athletic identity are associated with psychological distress (Brewer et al., 1993), most studies have been based on small, limited samples and few have considered the role that psychosocial resources may play (e.g., Lu & Hsu, 2013; Malinauskas, 2010).

Thus, the purpose of our study was two-fold. First, we examined the relationship between gender (women and men), race/ethnicity (White, Black, Latino/a), and competition level (NCAA Division I, Division II, Division III) to college athletes' athletic identity. Based on previous research (e.g., Anthony & Swank, 2018; Harrison et al., 2011; Melendez, 2009), we hypothesized that Black, compared to White, athletes, and DI/DII compared to DIII, would report a higher athletic identity. We did not have any apriori predictions regarding the more complex interactions of these variables and viewed this part as exploratory. Second, we examined, in the immediate aftermath of a uniform and large-scale disruption to collegiate sports (i.e., COVID-19 pandemic), how athletic identity related to athletes' psychological distress and the role that psychosocial resources (e.g., social support) played in moderating the relationship. We hypothesized that there would be a small, positive relationship between athletic identity and psychological distress; social support and self-compassion would buffer this relationship.

Methods

Participants

Athletes (N = 4,116; M_{age} = 19.84, SD = 1.14; women = 66.9%; White = 78.2%) drawn from NCAA athletic departments across the United States participated. Athletes participated in a variety of sports (i.e., soccer, track and field, lacrosse, bowling), and competed primarily at the Division I level (72.7%, n = 2,993). See Supplemental Table 1.

Supplemental Table 1

Frequencies, means, and standard deviations of demographic variables (N = 4116)

Variable	*N*	Percentage	Mean	*SD*	Range
Age	4116	-	19.84	1.14	18-27
NCAA Division					
Division I	2993	72.7%	-	-	-
Division II	552	13.4%	-	-	-
Division III	571	13.9%	-	-	-
Race/Ethnicity					
White, Non-Hispanic	3218	78.2%	-	-	-
Black/African-American	492	12.0%	-	-	-
Latino/a/x	406	9.9%	-	-	-
Gender					
Woman	2755	66.9%	-	-	-
Man	1355	32.9%	-	-	-
Missing	6	0.1%			
Academic Status					
First Year	1364	33.1%	-	-	-
Second Year	1355	32.9%	-	-	-
Third Year	1046	25.4%	-	-	-
Fourth Year	297	7.2%	-	-	-
Fifth Year and Above	54	1.3%	-	-	-
Sport					
Soccer	541	13.2%	-	-	-
Track and Field	419	10.2%	-	-	-
Football	367	8.9%	-	-	-
Swimming and Diving	329	8.0%	-	-	-
Softball	318	7.7%	-	-	-
Basketball	288	7.1%	-	-	-
Volleyball	280	6.8%	-	-	-
Cross Country	239	5.8%	-	-	-
Baseball	210	5.1%	-	-	-
Rowing	174	4.2%	-	-	-
Lacrosse	162	3.9%	-	-	-
Tennis	150	3.6%	-	-	-
Golf	129	2.9%	-	-	-
Gymnastics	89	2.2%	-	-	-
Field Hockey	82	2.0%	-	-	-
Cheer	76	1.8%	-	-	-
Wrestling	50	1.2%	-	-	-
Water Polo	42	1.0%	-	-	-
Beach Volleyball	33	0.8%	-	-	-
Equestrian	30	0.7%	-	-	-
Ice Hockey	27	0.7%	-	-	-
Other	22	0.5%	-	-	-
Bowling	18	0.4%	-	-	-
Fencing	15	0.4%	-	-	-
Skiing	13	0.3%	-	-	-
Rifle	12	0.3%	-	-	-
Missing	8	0.2%	-	-	-
Triathlon	1	0.0%	-	-	-

Measures

Demographics. Athletes provided information regarding their age, race/ethnicity (e.g., White, Black/African American), gender (e.g., woman, man, nonbinary), year in school, NCAA Division level (I, II, or III), and sport played.

Athletic Identity. Due to the extensiveness of the data being collected in the parent study (see procedure), three items were used from the 7-item Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001) to assess how strongly the athletes' identified with this role. The three items represented the exclusivity ("I consider myself an athlete"; "Most of my friends are athletes") and social identity ("Sport is the most important part of my life") dimensions of athletic identity; items from the negative affectivity dimension were not included. These three items were chosen due to their strong face validity and high and significant loadings within each dimension. For each of the three items, athletes responded from 1 (*strongly disagree*) to 7 (*strongly agree*). The total score is represented by the mean of the three items; higher scores indicate a stronger identification with the athlete role. In the current sample, Cronbach's alpha of the three-item scale was .624, 95% CI [.605, .643], which is consistent with alphas that have been based on the seven-item scale (Proios, 2012).

Psychological Distress. The 10-item Perceived Stress Scale (PSS-10; Cohen et al., 1983) was used to assess participants' perceptions of their current lives as stressful. For each item, such as "How often have you felt difficulties were piling up so high that you could not overcome them?," athletes responded from 1 (*never*) to 5 (*very often*) based on their experiences during the prior two weeks. The total score is represented by the sum of the 10 items; higher scores indicate more psychological distress. Extensive validity data exist for the PSS, including through cross-cultural studies (Cohen & Williamson, 1991; Mitchell et al., 2008; Ramirez & Hernandez, 2007; Siqueira et al., 2010). In the current sample, Cronbach's alpha was .856, 95% CI [.850, .862].

Depressive Symptomatology. The two-item Patient Health Questionnaire (PHQ-2; Kroenke et al., 2003), which is derived from the original PHQ-9 (Spitzer et al., 1999), was used to assess depressive symptomatology. For each item, such as "little interest or pleasure in doing things," athletes responded from 0 (*not at* all) to 3 (*nearly every day*) based on how they had been feeling during the prior two weeks. The total score is represented by the sum of the 2 items and can range from 0 (*no symptoms*) to 6 (*high level of symptoms*). Kroenke et al. (2003) provided extensive data on the scale's validity. In the current sample, Cronbach's alpha was .790, 95% CI [.777, .802].

Social Support. The family and friend dimensions from the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) was used to assess support. For each item, such as "I get the emotional help and support I need from my family," athletes responded from 1 (*very strongly disagree)* to 7 (*very strongly agree*) based on the support they had been receiving over the prior two weeks. The total score is represented by the mean of the 8 items; higher scores indicate more support. Extensive data on the validity of these dimensions as representations of social support have been published (e.g., Pushkarev et al., 2020; Zimet et al., 1988). In the current sample, Cronbach's alpha was .907, 95% CI [.902, .911].

Self-Compassion. The 12-item Self-Compassion Scale – Short Form (SCS-SF; Raes et al., 2011) was used to assess self-compassion across the dimensions of self-kindness, common humanity, and mindfulness. Athletes rated each item, such as, "When I fail at something important to me, I become consumed by feelings of inadequacy," from 1 (*almost never*) to 5 (*almost always*). The total score is represented by the sum of the 12 items; higher scores indicate higher levels of self-compassion. Neff and colleagues (Neff et al., 2018; Neff, 2020; Raes et al., 2011) have provided extensive data confirming the scale's validity. In the current sample, Cronbach's alpha was .830, 95% CI [.823, .838].

Procedures

Data for this study were part of a larger, parent investigation of college athletes' psychological well-being and coping during the COVID-19 pandemic; data collection occurred from April 12, 2020 to May 22, 2020. Following IRB approval from the researchers' university, more than 80 NCAA Division I, II, and III athletic departments messaged their athletes to invite them to participate. Each message described the study, its voluntary nature, and time commitment, and provided the survey link, which was hosted on Qualtrics. Athletes provided consent and then completed the larger survey measures, which were randomized in their presentation. Further, at the time of data collection, all athletes in the current sample indicated that they would be continuing to play their college sport in fall 2020.

Data Analysis

Data passed normality based upon skew, kurtosis, and outliers. Regarding data missingness, Little's MCAR test was nonsignificant ($p > .10$) after accounting for gender and race/ethnicity. Thus, a multiple imputation ($m = 100$) with PcAux (Lang et al., 2017) was conducted using the MCMC method and including all variables to inform the imputation process, as well as linear and nonlinear components as auxiliary variables (Howard et al., 2015). Analyses were conducted using SPSS (v. 26). For the first research question, an ANOVA was run with athletic identity as the dependent variable and race/ethnicity (White, Black/African American, and Latino/a), gender (men and women), and competition level (Division I, Division II, and Division III) as the independent variables. The three- and two-way interactions were tested as well as the main effects of the independent variables. For the second research question, the PROCESS macro Model 3 (version 4.0; Hayes, 2021) was used to test the direct and moderating relationships of athletic identity, social support, and self-compassion to the athletes' depressive symptoms and their psychological distress. The PROCESS macro was run separately for each psychological outcome. Within the PROCESS analyses, 95% confidence intervals (CI), based on bootstrap estimates from 5,000 resamples, was used to determine significant effects.

Results and Discussion

Relationships to Athletic Identity

The race/ethnicity by gender by competition level interaction, F (4, 4109) = .472 , p = .757, as well as the race/ethnicity by competition level, F (4, 4109) = .459, p = .766, gender by competition level, F (2, 4092) = .574, p = .563, and main effects for race/ethnicity, F (2, 4109) = 2.141, p = .118, gender, F (1, 4109) = 3.493, p = .062, and competition level, F (2, 4109) = .412, p = .662, were not significant. However, there was a significant gender by race/ethnicity

interaction, F (2, 4109) = 2.932, p = .05. Specifically, Black male athletes (M = 6.01, SD = 1.14) reported significantly stronger athletic identities than did White male (M = 5.71, SD = .98; Cohen's d = -0.28) and White female (M = 5.73, SD = .99; Cohen's d = -0.26) athletes; there were no other significant mean differences among the other race by gender groups. See Table 1.

Table 1
Means, and SDs for Athletic Identity by Athlete Gender and Race

Race	Gender	*M*	*SD*	*n*
White	Woman	5.73[ab]	.99	2251
	Man	5.71[ab]	.98	964
Black	Woman	5.77[bc]	1.03	240
	Man	6.01[cd]	1.14	251
Latinx	Woman	5.81[bc]	.99	264
	Man	5.89[bc]	1.10	140

Note. Athletic Identity Measurement Scale (range = 1, *low athletic identity* to 7, *high athletic identity*). Race by gender interaction, F (2, 4109) = 2.932, p = .05. Mean scores that do not share common superscripts are significantly different at $p < .05$.

Athletic Identity and Psychological Distress

Due to the significant race by gender interaction, the regression models within each race/ethnicity by gender subsample (e.g., White female, Black female) were tested.

Depressive Symptomatology. For the White female athletes, the full regression model was significant, F (7, 2243) = 110.61, p = .000, R^2 = .26. Although the main effect for athletic identity was not significant (b = .01, 95% CI [-.049, .067]), there were significant main effects for self-compassion (b = -.076, 95% CI [-.082, -.069]) and social support (b = -.252, 95% CI [-.312, -.192]). Additionally, the three-way interaction of athletic identity by social support by self-compassion was significant (b = .006, 95% CI [.001, .012]). When social support and self-compassion were low, a stronger athletic identity was related to more reported depressive symptoms (b = .117, 95% CI [.032, .203]); no other interaction slope was significant. See Figure 1 and Supplemental Table 2.

For the Black female athletes, the overall model was significant, F (7, 232) = 13.29, p = .000, R^2 = .29. Although the main effect for athletic identity was not significant (b = .070, 95% CI [-.124, .264]), there were significant main effects for self-compassion (b = -.089, 95% CI [-.112, -.066]) and social support (b = -.246, 95% CI [-.412, -.079]); no interactions reached significance (all p's > .200). Thus, independent of athletic identity, having higher self-compassion and more social support were associated with the Black female athletes experiencing less depressive symptomatology. See Supplemental Table 3.

For the Latina athletes, the overall model was significant, F (7, 256) = 12.62, p = .000, R^2 = .26. Again, the main effect for athletic identity was not significant (b = -.088, 95% CI [-.286, .110]), but self-compassion (b = -.082, 95% CI [-.106, -.059]) and social support (b = -.278, 95% CI [-.467, -.090]) were; no interaction effects reached significance (all p's > .241). Regardless of

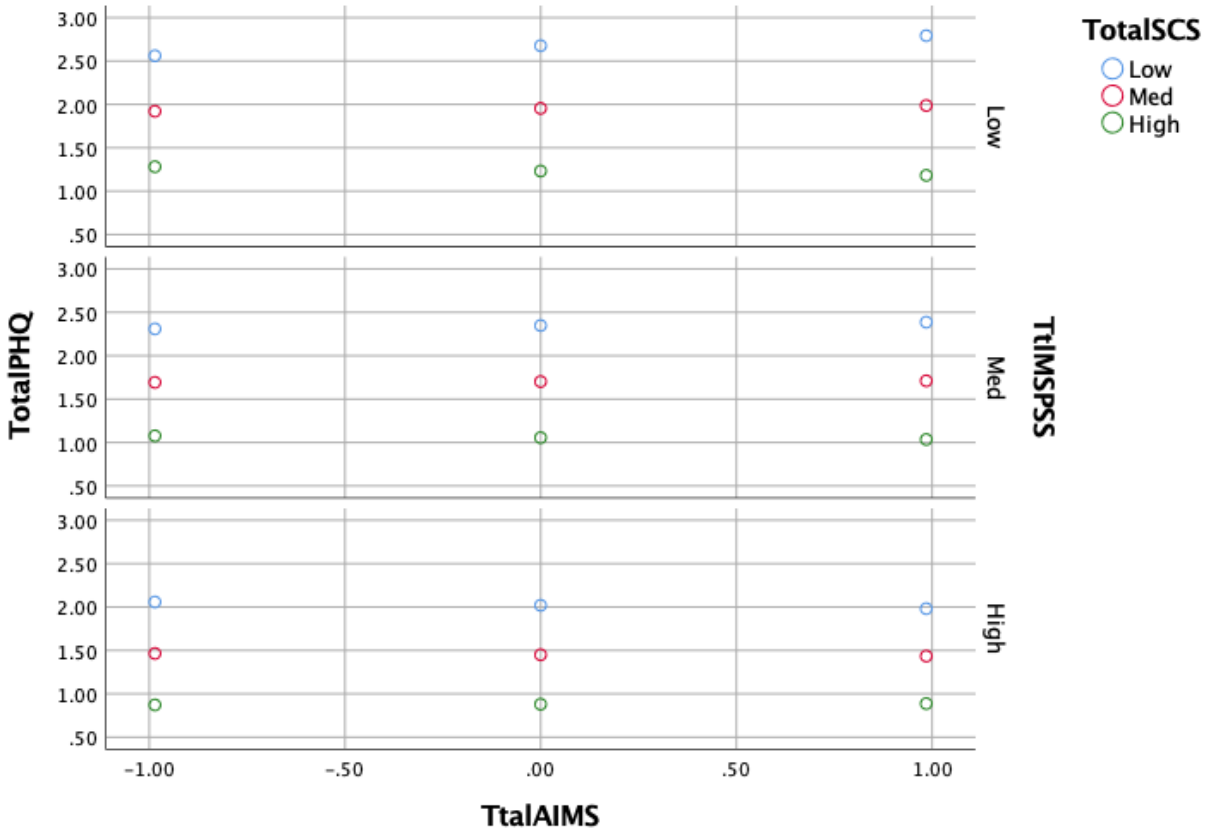

Figure 1.
Relationship between Athletic Identity and Depressive Symptoms Based on Levels of Self-Compassion and Social Support White Female Athletes (n = 2251)

Note. PHQ = Patient Health Questionnaire (range = 0, no symptoms to 6, high level of symptoms); AIMS = Athletic Identity Measurement Scale (range = 1, low athletic identity to 7, high athletic identity); SCS = Self-Compassion Scale (range = 12 to 60, with higher scores indicating higher self-compassion); MSPSS = Multidimensional Scale of Perceived Social Support (range = 1, low support to 7, high support). Low SCS, MSPSS (1 SD below the mean), Medium SCS, MSPSS (at the mean), High SCS, MSPSS (1 SD above the mean). When social support *and* self-compassion are low, b = .118, 95% CI .032: .203; the slope for the other 8 regression lines are nonsignificant (all *p*'s > .348).

Supplemental Table 2

Moderation analysis predicting Psychological Distress among White Female Athletes (n = 2251)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.26	1.78	110.61**			
Predictors:						
AIMS (A)				0.008	0.029	0.299
SCS (B)				-0.075	0.004	-21.360**
A x B Interaction				-0.004	0.003	-1.061
MSPSS (C)				-0.252	0.031	-8.275**
A x C Interaction				-0.025	0.031	-0.800
B x C Interaction				0.009	0.003	3.007**
A x B x C Interaction				0.006	0.003	2.189*
Model 3: PSS	0.39	23.92	205.56**			
Predictors:						
AIMS (A)				0.114	0.109	1.050
SCS (B)				-0.401	0.013	-30.981**
A x B Interaction				-0.012	0.012	-1.016
MSPSS (C)				-1.004	0.112	-9.000**
A x C Interaction				0.193	0.112	1.722
B x C Interaction				-0.003	0.011	-0.260
A x B x C Interaction				0.015	0.010	1.419

Note. *indicates significance at .05 level, ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

Supplemental Table 3

Moderation analysis predicting Psychological Distress among Black Female Athletes (n = 240)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.29	2.11	13.29**			
Predictors:						
AIMS (A)				0.070	0.098	0.711
SCS (B)				-0.089	0.012	-7.567**
A x B Interaction				-0.016	0.013	-1.284
MSPSS (C)				-0.246	0.085	-2.909**
A x C Interaction				0.043	0.097	0.449
B x C Interaction				-0.001	0.009	-0.098
A x B x C Interaction				0.001	0.011	0.134
Model 3: PSS	0.37	23.64	19.22**			
Predictors:						
AIMS (A)				0.214	0.329	0.649
SCS (B)				-0.325	0.039	-8.277**
A x B Interaction				-0.071	0.043	-1.667
MSPSS (C)				-1.239	0.283	-4.380**
A x C Interaction				0.562	0.323	1.739
B x C Interaction				0.083	0.033	2.509**
A x B x C Interaction				-0.067	0.038	-1.761

Note. ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

athletic identity levels, more self-compassion and more social support were related to lower levels of depressive symptoms. See Supplemental Table 4.

For the White male athletes, the full model was significant, F (7, 956) = 33.11, p = .000, R^2 = .19. Although the main effect for athletic identity was not significant (b = -.047, 95% CI [-.139, .044]), there were significant main effects for self-compassion (b = -.068, 95% CI -.079: -.057) and social support (b = -.191, 95% CI [-.273, -.109]) and a significant interaction between the two (b = .013, 95% CI [.003, .023]); no other interactions were significant (all p's > .574). Analysis of the simple slopes for the self-compassion by social support interaction revealed that, at all levels of social support, the slope of the regression line between self-compassion and depressive symptomatology significantly differed from zero (high social support: b = -0.054, SE_b = .008, t = -7.159, p < .00001; low social support: b = -.082, SE_b = .008, t = -10.338, p < .00001). Further, when self-compassion was low, the athletes who were low in social support reported more depressive symptoms than those who had strong support systems (t = -13.290, p < .0001, SD_{pooled} = 1.454; Cohen's d = .43). Additionally, when self-compassion was high, the athletes who were low in social support reported more depressive symptomatology than those who had strong support systems (t = -4.023, p = .001, SD_{pooled} = 1.454; Cohen's d = .13). See Figure 2 and Supplemental Table 5.

For the Black male athletes, the full model was significant, F (7, 243) = 9.18, p = .000, R^2 = .21. Although athletic identity was unrelated to symptoms of depression (b = -.030, 95% CI [-.186, .126]), there was a significant main effect for self-compassion (b = -.09, 95% CI [-.118, -.066]); no other main or interaction effects were significant (all p's > .145). Thus, regardless of the Black male athletes' levels of athletic identity or social support, the men with higher levels of self-compassion reported less depressive symptomatology. See Supplemental Table 6.

For the Latino athletes, the full model was significant, F (7, 132) = 5.93, p = .000, R^2 = .24. Although athletic identity was unrelated, (b = .136, 95% CI [-.075, .347]), there was a significant main effect for self-compassion (b = -.064, 95% CI [-.099, -.029]) and social support (b = -.375, 95% CI [-.588, -.163]); no interaction effects were significant (all p's > .069). Independent of athletic identity, higher levels of self-compassion and social support were associated with less depressive symptomatology. See Supplemental Table 7.

Summary. For the White female athletes, social support and self-compassion buffered the relationship between athletic identity and depressive symptomatology. Athletes who reported a stronger athletic identity experienced less depressive symptomatology when social support and self-compassion both were high. For the Black female, Latina athletes, and Latino athletes, regardless of the athletes' strength of identity, higher reported levels of social support or self-compassion were related to less depressive symptomatology. For the White male athletes, regardless of athletic identity level, self-compassion and social support interacted significantly; athletes who were high in social support and high in self-compassion reported the least depressive symptomatology. For Black male athletes, only self-compassion was significant, being related to lower levels of depression.

Psychological Distress. For the White female athletes, the full model was significant, F (7, 2243) = 205.56, p = .000, R^2 = .39. Although the main effect for athletic identity was not significant (b = .115, 95% CI [-.099, .329]), there were significant main effects for self-compassion (b = -.401, 95% CI [-.427, -.376]) and social support (b = -1.00, 95% CI [-1.223, -.785]); no interactions were significant (all p's > .085). More support and more self-compassion, independent of athletic identity, were related to less psychological distress. See Supplemental Table 2.

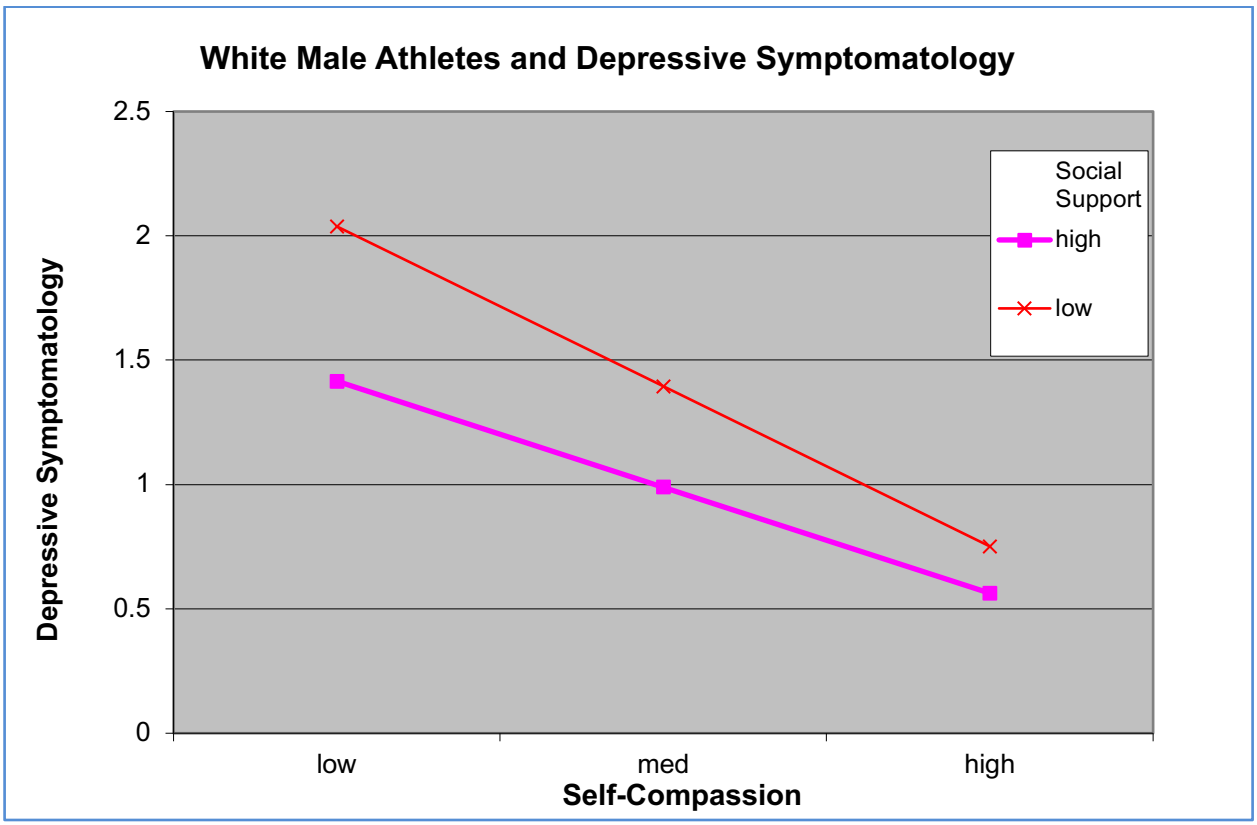

Figure 2.
Relationship between Athletic Identity and Depressive Symptoms Based on Levels of Self-Compassion and Social Support for White Male Athletes (n = 964)

Note. PHQ = Patient Health Questionnaire (range from 0, no symptoms to 6, high level of symptoms); AIMS = Athletic Identity Measurement Scale (range =1, low athletic identity to 7, high athletic identity); SCS = Self-Compassion Scale (range = 12, low self-compassion to 60, high self-compassion); MSPSS = Multidimensional Scale of Perceived Social Support (range = 1, low support to 7, high support). High Social Support: b = -0.054, SE_b = .008, t = -7.159, p < .00001; Low Social Support: b = -.082, SE_b = .008, t = -10.338, p < .00001.

For Black female athletes, the full regression model was significant, F (7, 232) = 19.22, p = .000, R^2 = .37. Although the main effect for athletic identity was not significant (b = .214, 95% CI [-.436, .864]), there were significant main effects for social support (b = -1.239, 95% CI [-1.796, -.682]) and self-compassion (b = -.326, 95% CI [-.403, -.248]) as well as a significant interaction between the two (b = .083, 95% CI [.018, .148]). Analysis of the simple slopes revealed that, at all levels of social support, the lines between self-compassion and psychological distress significantly differed from zero (high social support: b = -0.225, SE_b = .059, t = -3.792, p = .0000; low social support: b = -.427, SE_b = .059, t = -7.294, p = .0011). Further, when self-compassion was low, the athletes who were low in social support reported more psychological distress than those who had strong support systems (t = -12.197, p < .0001, SD_{pooled} = 6.021; Cohen's d = .78). Additionally, when self-compassion was high, the athletes who were low in

social support reported more psychological distress than those who had strong support systems (t = -3.292, p = .001, SD_{pooled} = 6.021; Cohen's d = .21). See Figure 3 and Supplemental Table 3.

For Latina athletes, the full regression model was significant, F (7, 256) = 30.89, p = .000, R^2 = .46. Although athletic identity was unrelated (b = -.213, 95% CI [-.817, .390]), there was a significant main effect for self-compassion (b = -.389, 95% CI [-.461, -.318]) and social support (b = -1.134, 95% CI [-1.708, -.560]); no interaction effects were significant (all p's > .106). Regardless of athletic identity, more self-compassion and higher levels of support were associated with less psychological distress. See Supplemental Table 4.

For the White male athletes, the full regression model was significant, F (7, 956) = 78.16, p = .000, R^2 = .36. Although athletic identity was unrelated (b = -.038, 95% CI [-.374, .298]), there was a significant main effect for self-compassion (b = -.432, 95% CI [-.473, -.391]) and social support (b = -.627, 95% CI [-.931, -.323]); no interaction effects were significant (all p's > .606). Independent of athletic identity, higher levels of self-compassion and social support were related to less psychological distress. See Supplemental Table 5.

For the Black male athletes, the full model was significant, F (7, 243) = 10.58, p = .000, R^2 = .23. Although athletic identity was unrelated (b = -.074, 95% CI [-.681, .532]), there was a significant main effect for self-compassion (b = -.346, 95% CI [-.448, -.245]); no other main or interaction effects were significant (all p's > .088). Regardless of athletic identity or social support, the more compassionate they were, the less distress they experienced. See Supplemental Table 6.

For the Latino athletes, the full model was significant, F (7, 132) = 7.56, p = .000, R^2 = .29. Although athletic identity was unrelated (b = .039, 95% CI [-.738, .818]), there was a significant main effect for self-compassion (b = -.369, 95% CI [-.499, -.240]) and social support (b = -.872, 95% CI [-1.657, -.087]); no interaction effects were significant (all p's > .664). Independent of athletic identity levels, higher levels of self-compassion and social support reported were associated with less psychological distress. See Supplemental Table 7.

Summary. For the White female, White male, Latina, and Latino athletes, regardless of athletes' identity levels, either more social support or more self-compassion was related to lower levels of psychological distress. Regardless of Black female athletes' identity levels, self-compassion and social support significantly interacted; athletes who reported high social support and high self-compassion reported the least psychological distress. For Black male athletes, only self-compassion was found to be significantly related to experiencing less distress.

Discussion

The COVID-19 global pandemic halted college athletes' sport participation indefinitely and this threatened their athletic identities (Graupensperger et al., 2020). Despite this threat, the athletes scored moderately high on the AIMS (mean score of 5.75 out of 7). This higher score suggests that their identification with the athlete role remained relatively intact, which makes sense in that (a) the athletes were still within the first two months of the pandemic and still relatively close to having been actively immersed in the collegiate sport environment, and (b) there was still hope among athletes that sport seasons would soon be reinstated, allowing them to return to their athlete roles. However, between group differences were found, specifically within the interaction of gender and race/ethnicity. Consistent with past research (Harrison et al., 2011; Steinfeldt et al., 2010), the Black male athletes reported stronger athletic identities compared to their White male and White female counterparts; no other between group differences emerged. Compared to White athletes (Eastman & Billings, 2001; Spaaij et al., 2015), Black male athletes

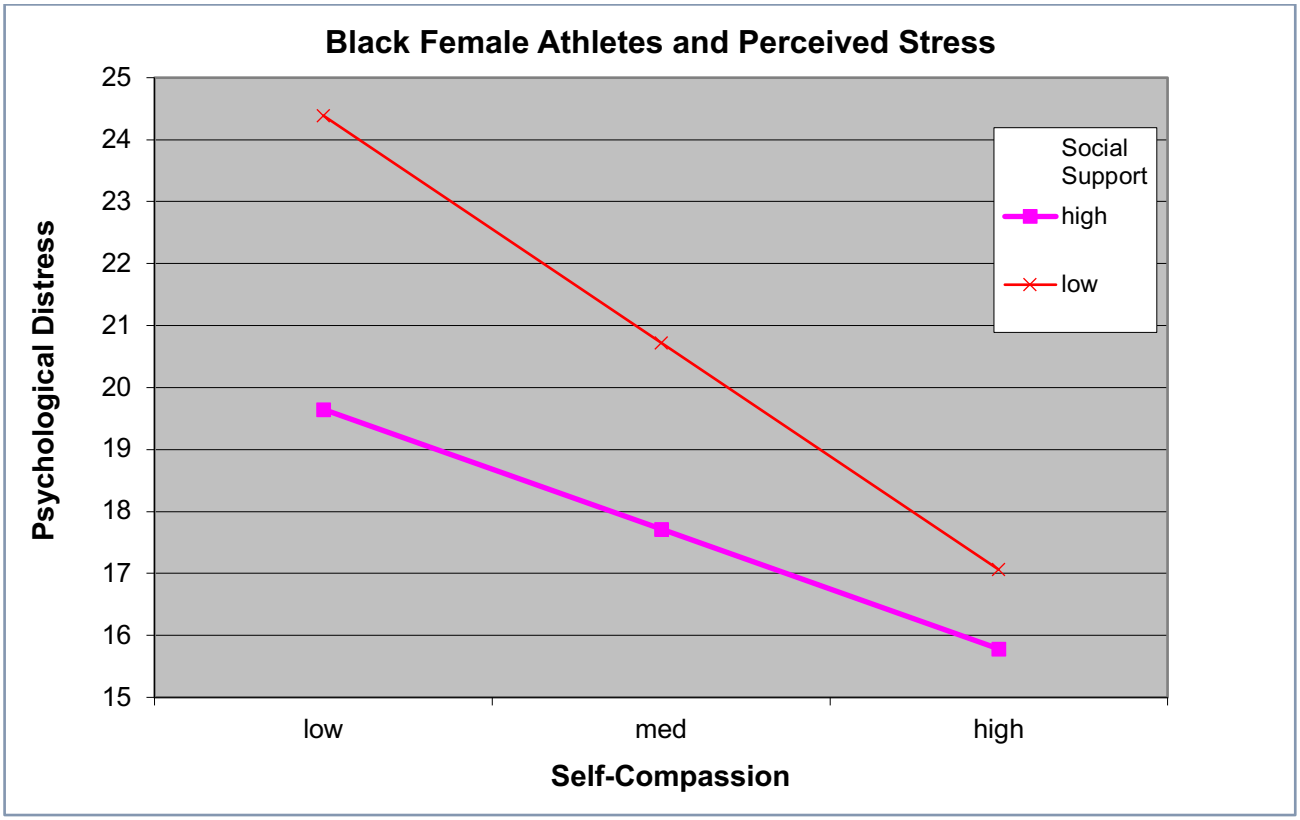

Figure 3.
Relationship between Athletic Identity and Perceived Stress Based on Levels of Self-Compassion and Social Support for Black Female Athletes (n = 240)

Note. PSS = Perceived Stress Scale (range = 10, low psychological distress to 50, high psychological distress); AIMS = Athletic Identity Measurement Scale (range =1, low athletic identity to 7, high athletic identity); SCS = Self-Compassion Scale (range = 12, low self-compassion to 60, high self-compassion); MSPSS = Multidimensional Scale of Perceived Social Support (range = 1, low support to 7, high support). High Social Support: b = -0.225, SE_b = .059, t = -3.792, p = .0000; Low Social Support: b = -.427, SE_b = .059, t = -7.294, p = .0011.

Supplemental Table 4

Moderation analysis predicting Psychological Distress among Latina Athletes (n = 264)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.26	2.07	12.62**			
Predictors:						
AIMS (A)				-0.088	0.101	-0.871
SCS (B)				-0.082	0.012	-6.904**
A x B Interaction				-0.001	0.013	-0.063
MSPSS (C)				-0.278	0.095	-2.915**
A x C Interaction				0.101	0.086	1.175
B x C Interaction				0.008	0.010	0.761
A x B x C Interaction				0.007	0.009	0.768
Model 3: PSS	0.46	19.29	30.89**			
Predictors:						
AIMS (A)				-0.213	0.307	-0.696
SCS (B)				-0.389	0.036	-10.729**
A x B Interaction				0.039	0.040	0.968
MSPSS (C)				-1.134	0.291	-3.891**
A x C Interaction				-0.235	0.262	-0.897
B x C Interaction				-0.018	0.032	-0.568
A x B x C Interaction				-0.048	0.029	-1.623

Note. *indicates significance at .05 level, ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

Supplemental Table 5

Moderation analysis predicting Psychological Distress among White Male Athletes (n = 964)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.19	1.71	33.11**			
Predictors:						
AIMS (A)				-0.047	0.046	-1.025
SCS (B)				-0.068	0.056	-12.122**
A x B Interaction				0.003	0.006	0.562
MSPSS (C)				-0.191	0.042	-4.552**
A x C Interaction				-0.019	0.047	-0.427
B x C Interaction				0.013	0.005	2.582**
A x B x C Interaction				-0.001	0.005	-0.317
Model 3: PSS	0.36	23.35	78.16**			
Predictors:						
AIMS (A)				-0.038	0.171	-0.219
SCS (B)				-0.432	0.021	-20.735**
A x B Interaction				0.011	0.021	0.516
MSPSS (C)				-0.627	0.155	-4.051**
A x C Interaction				-0.042	0.172	-0.242
B x C Interaction				0.001	0.018	0.071
A x B x C Interaction				0.007	0.019	0.381

Note. ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

Supplemental Table 6

Moderation analysis predicting Psychological Distress among Black Male Athletes (n = 251)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.21	1.62	9.18**			
Predictors:						
AIMS (A)				-0.030	0.079	-0.379
SCS (B)				-0.092	0.013	-6.961**
A x B Interaction				0.012	0.014	0.862
MSPSS (C)				-0.050	0.070	-0.719
A x C Interaction				-0.021	0.068	-0.305
B x C Interaction				0.014	0.009	1.463
A x B x C Interaction				-0.002	0.011	-0.138
Model 3: PSS	0.23	24.56	10.57**			
Predictors:						
AIMS (A)				-0.074	0.308	-0.241
SCS (B)				-0.346	0.051	-6.735**
A x B Interaction				0.004	0.053	0.079
MSPSS (C)				-0.468	0.273	-1.713
A x C Interaction				0.075	0.266	0.283
B x C Interaction				0.041	0.036	1.119
A x B x C Interaction				-0.058	0.044	-1.322

Note. ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

Supplemental Table 7

Moderation analysis predicting Psychological Distress among Latino Athletes (n = 140)

Model/Predictor	R^2	*MSE*	*F*	b	SE b	*t*
Model 3: PHQ	0.24	1.77	5.93**			
Predictors:						
AIMS (A)				0.136	0.107	1.276
SCS (B)				-0.064	0.018	-3.622**
A x B Interaction				0.018	0.014	1.234
MSPSS (C)				-0.375	0.107	-3.490**
A x C Interaction				0.229	0.125	1.834
B x C Interaction				0.007	0.015	0.446
A x B x C Interaction				0.008	0.016	0.493
Model 3: PSS	0.29	24.00	7.56**			
Predictors:						
AIMS (A)				0.039	0.339	0.101
SCS (B)				-0.369	0.065	-5.641**
A x B Interaction				-0.007	0.053	-0.136
MSPSS (C)				-0.872	0.397	-2.197*
A x C Interaction				-0.199	0.461	-0.433
B x C Interaction				0.017	0.057	0.290
A x B x C Interaction				-0.026	0.059	-0.436

Note. * indicates significant at .05 level, ** indicates significance at .01 level. PHQ = Patient Health Questionnaire; PSS = Perceived Stress Scale; AIMS = Athletic Identity Measurement Scale; SCS = Self-Compassion Scale; MSPSS = Multidimensional Scale of Perceived Social Support.

tend to be valued more for their athleticism (e.g., physically gifted) than for other abilities (e.g., hard-work, determination) and personal characteristics (e.g., intelligence, leadership skills; Eastman & Billings, 2001; Spaaij et al., 2015). Thus, this focus on sport involvement, and the respect and acceptance received because of it, may serve to reinforce, and strengthen, Black male athletes' athletic identities and push them to disregard their other roles or interests (e.g., student, artist; Huml et al., 2019; Melendez, 2009; Steinfeldt et al., 2010).

Although being seen and accepted primarily through the lens of an athlete can be limiting, a stronger athletic identity may have unintended benefits. Black male athletes experience racism, bias, and discrimination generally in society, and specifically on their campuses, that undermine their well-being (Anthony & Swank, 2018; Harrison et al., 2011; Steinfeldt et al., 2010). Such experiences may be exacerbated at Predominantly White Institutions (PWIs; Anthony & Swank, 2018; Steinfeldt et al., 2010), and some of the Black athletes in our sample attended such institutions. However, when Black male athletes are strongly identified with their athletic role, and are receiving the social acceptance, respect, support, and value from media, family, and friends that comes from playing collegiate sports (Anthony & Swank, 2018; Harrison et al., 2011; Steinfeldt et al., 2010), they may be protected to some degree against the marginalizing attitudes and behaviors that otherwise surround them. In the current sample, Black women, Latinas, and Latinos reported AI scores similar to the Black men; thus, their athletic identity also may serve this potential protective factor (Anthony & Swank, 2018; Ortega, 2021). We make this assertion cautiously recognizing that college sports are an extension of an oppressive and marginalizing academic system. For example, Cooper et al. (2017) used critical race theory to analyze NCAA's policies and practices. They found that, similar to inequalities generally observed in the United States, racial disparities existed in relation to the concept of amateurism, eligibility standards, academic progress rate and graduation success rate, underrepresentation of racial diversity in leadership positions, and lack of training in cultural competency for athletic department staff (Cooper et al., 2017).

Although male and female athletes have reported experiencing high levels of psychological distress after COVID-19 (NCAA, 2020b), such distress appears to have been minimally exacerbated by disruptions to their athletic identities but lessened considerably through their self-compassion and social support (Graupensperger et al., 2020; Hagiwara et al., 2021). With the exception of the White female athletes, for all athletes in our sample, athletic identity was unrelated to either measure of psychological distress. For the White female athletes, a stronger identification with the athlete role was associated with higher levels of depressive symptoms, but only when both self-compassion and social support were low. Graupensperger et al. (2020) also found that when the college athletes in their sample (63% women; racial identities not provided) felt less supported by their teammates, they experienced more disruption in their athletic identities and reported higher levels of depressive symptoms.

Inconsistent with findings from past research (Houle et al., 2010; Huml, 2018; Lamont-Mills & Christensen, 2006), the divisional level at which the athletes competed was unrelated to their athletic identity, both directly and in conjunction with their gender and race/ethnicity. In past studies, Division I and II athletes have reported equally strong athletic identities, both of which being higher than Division III athletes' reported scores (Huml, 2018). Similarly, Stokowski et al. (2022) found that Division III athletes ($N = 332$) scored only at the midpoint of the Athletic Identity Measurement Scale, suggesting only a moderate identification with this role. Given the consistency of past research findings regarding athletic identity and NCAA divisional levels, there are no definitive reasons to explain the nonsignificant findings in this study, though an explanation may exist within the uniqueness of the pandemic and its fallout. The COVID-19 global pandemic uniformly and equally disrupted the identities of all athletes, regardless of

division. In response, athletic departments engaged in extensive outreach to their athletes and athletes themselves often banded together to form support networks, particularly early in the pandemic when our data were collected (Ashland's Sports Information Department, 2020; Doster, n.d.). These responses, in essence, increased the salience of the athlete identity; they were different from other college students, experiencing the unprecedented shutdown of collegiate sports and receiving consistent support and outreach because of their athlete status. Thus, in the immediate aftermath of COVID, identity may have remained relatively strong.

Although the expected effects of athletic identity were minimally realized, social support and self-compassion were related significantly, either singly or in combination, to fewer depressive symptoms and lower levels of general psychological distress across all of the athletes. For example, for the Black female athletes and White male athletes, social support and self-compassion interacted in relation to their experiences of distress. When self-compassion was low, or high, the amount of support the athletes' perceived as available to them made a difference. In these conditions, psychological distress was significantly higher when social support also was low, though the effects were strongest in the low support by low self-compassion condition. For the other athlete subgroups (e.g., Latinas, Latinos), social support and self-compassion were independent predictors and, as expected, related to lower levels of distress. In general, social support provides emotional and tangible resources that allow individuals to successfully navigate stressful situations without becoming overwhelmed or psychologically distressed (Brown et al., 2018; Graupensperger et al., 2020; Hagiwara et al., 2021). Self-compassion, which is rooted in mindfulness, self-kindness, and common humanity, cultivates understanding and acceptance rather than self-criticism during times of setbacks, failures, and stress, which helps individuals maintain a sense of psychological equilibrium and well-being (Huysmans & Clement, 2017; Neff, 2003). Given the consistency of our findings, which are in line with other recent studies on the positive effects of social support and self-compassion (e.g., Brown et al., 2018; Graupensperger et al., 2020; Hagiwara, 2021; Huysmans & Clement, 2017; Lu & Hsu, 2013; Mosewich et al., 2011), athletic departments should consider how they can assist athletes in developing supportive networks (e.g., family, teammates, friends) and in being more compassionate with themselves.

Limitations and Directions for Future Research

Despite our study's strengths, such as examining the interplay of race/ethnicity and gender and collecting data in the immediate aftermath of the COVID-19 pandemic through a large, nationally-based sample, there were limitations that warrant discussion. First, although all measures were psychometrically sound, all were quantitative and based on self-report. Thus, results are limited by the biases that are inherent in self-report (e.g., social desirability), which may be associated with underreporting of mental health concerns. In future studies, if possible, researchers may conduct structured clinical interviews with subsets of their samples to verify rates of diagnoses. Second, although our focus was on what occurred in relation to the disruption of athletes' identities during this unprecedented event, our data is cross-sectional, and we cannot comment on what may have occurred to athletes as they returned to sport in the fall and were able to realize their athletic identities again. Research that addresses these temporal questions also is needed to understand how athletic identities evolve over time as potentially disruptive events ebb and flow. Further, given the initially positive role that social support and self-compassion played in ameliorating athletes' distress in the immediate aftermath of the pandemic, research is needed to determine how such resources might affect athletes over time as they returned to sport, continued to navigate COVID-19 restrictions, and managed an ongoing virtual

educational system. Third, our sample included athletes only from PWIs and who identified as White, Black, and Latino/a; due to the very small number of athletes who identified with different race/ethnicities in our sample, we were unable to examine their experiences. Thus, future research might try to oversample Asian/Pacific Islander, Native American, and Biracial or Multiracial student-athletes, targeting various institutions (e.g., Minority Serving Institutions, Historically Black Colleges and Universities) to ensure representativeness. Lastly, although we were able to examine the interplay of race/ethnicity, gender, and athletic identity, we did not directly do so in the context of the systems of oppression that exist within collegiate sport environments (Cooper et al., 2017). For this reason, future studies might examine athletic identity with consideration of the effects of racism, sexism, and other forms of systemic oppression.

Clinical Implications

The present study has implications for how sports medicine professionals and athletic departments may support their athletes as they cope with the stress and disruption related not only to the COVID-19 pandemic, but to being a collegiate student-athlete generally and during the significant life transitions they will face (e.g., retiring from sport). Given the consistent and strong relationships between the two psychosocial resources and experiencing much lower levels of distress during this crisis, and other research that has documented their general benefits in terms of psychological well-being (Huysmans & Clement, 2017; Neff, 2003), a compelling case exists for a holistic care model that focuses on not just the athlete-performer, but also the athlete-person. Within such holistic approaches, athletes can be helped to (a) develop and maintain supportive networks (e.g., family, friends) and (b) adopt practices and perspectives consistent with being mindful and kind to oneself; for example, the approaches can be taught individually (e.g., counseling sessions) and through workshops (Gabana et al., 2019; Reis et al., 2015). As found in our study, these two psychosocial resources had ameliorative effects for every gender by racial subgroup, further supporting their application across for all athletes.

Conclusion

The COVID-19 global pandemic, and cancellation of collegiate sports, were an unprecedented set of events that disrupted the lives of every collegiate athlete and provided a unique opportunity to study the interplay of athletic identity, psychosocial resources, and psychological distress (NCAA, 2020b). The strength of the athletes' identities in the immediate aftermath of the pandemic varied based on their gender and race, but not their divisional level, providing a more nuanced understanding of this variable within the collegiate sport environment. Further, the relationship of this identity to psychological distress existed, but only among the White female athletes; and then, specifically, when they were low in social support and self-compassion. For the remaining subgroups of athletes, social support and self-compassion were related to less psychological distress and fewer depressive symptoms, both of which were otherwise quite elevated during April/May 2020 (NCAA, 2020b). Self-compassion and social support offer powerful benefits that athletic department and sports medicine personnel can leverage by creating programming that helps their athletes develop these resources.

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