JOURNAL OF INTERCOLLEGIATE SPORT

Vol. 18 No. 3 2025

JOURNAL OF INTERCOLLEGIATE SPORT

What Factors Drive NCAA Division I Women's Volleyball Attendance; Do Free Tickets Equal More Fans?

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Volleyball is growing in popularity throughout the United States, both as a participatory and spectator sport, particularly at the collegiate level. Little prior research, however, has examined demand variables driving NCAA Division I volleyball attendance. In particular, the current study examines whether selling tickets, as opposed to allowing spectators to attend a match without paying for a ticket, is correlated with attendance. Using a random effects regression model, the current investigation found factors such as promotions, home team success, visiting team success, and proximity of schools all have a positive correlation with attendance. The practice of selling tickets for entry, however, does not have a significant relationship with fan attendance when controlling for a wide variety of time/environment-related, game-related, performance-related, and market-related variables.

Keywords: ticketing, attendance, volleyball, pricing

What Factors Drive NCAA Division I Women's Volleyball Attendance; Do Free Tickets Equal More Fans?

The sport of women's volleyball is gaining popularity across the United States. According to the National Federation of State High School Associations (NFHS), volleyball (547,775) ranked well ahead of basketball (383,362) in the total number of girls' high school participants in 2022-23 (NFHS, 2023). Driven by high levels of participation at the high school level, it has been suggested the sport is being embraced by sport fans in younger demographics (Petit, 2023). Additionally, according to a survey of women's sports fandom in America, volleyball is the sport U.S. adults most enjoy watching (Burns, 2023).

Journal of Intercollegiate Sport, 2024, 18.3

In particular, interest in NCAA Division I women's volleyball has grown exponentially, as television ratings for women's collegiate volleyball surged in 2023 (Hamel, 2023). On October 29, 2023, a Big Ten Conference regular-season match between Wisconsin and Minnesota became the most-watched in NCAA Division I volleyball history with 1.66 million viewers on Fox, averaging more viewers than Formula 1 racing on ABC, the Premier League on NBC, and the NFL Countdown on ESPN on that same day. This broke the previous record from 2021, when 1.19 million viewers watched Wisconsin beat Nebraska to win the national championship on Dec. 18 in Columbus, Ohio. As another example of the growing popularity of volleyball as a spectator sport, Nebraska's volleyball victory over Wisconsin on October 21, 2023 averaged more broadcast viewers (612,000) than the Nebraska football game (560,000) that same day on the same Big Ten Network (Hruby, 2023).

Perhaps the biggest story in collegiate volleyball for the 2023 season, however, came when more than half a million television viewers tuned in to watch Nebraska sweep Omaha in an early non-conference contest. What was most striking about that particular match was its location and the number of fans in the stands. On what was dubbed "Volleyball Day in Nebraska," the NCAA Division I record for women's volleyball attendance was shattered when 92,003 attendees packed into Memorial Stadium in Lincoln, Nebraska to watch the match (NCAA, 2023). Not only did this set a new standard for women's college volleyball attendance, but it also broke the world record for *any* women's sporting event, surpassing the previous standard set at a 2022 UEFA Women's Champions League match at Camp Nou. Two weeks later, the NCAA Division I women's volleyball indoor regular season attendance record was broken when Wisconsin beat Marquette at Milwaukee's Fiserv Forum in front of 17,037 fans.

These record-breaking spectator numbers reflect a surge in consumer interest in collegiate women's volleyball, particularly for marquee matches. Growth in paid attendance may also help athletics departments which face continued pressure to be more self-sufficient and fiscally responsible (e.g., McMillen & Kirwan, 2021; Ridpath et al., 2015). With growing concerns over the financial solvency of NCAA Division I athletic departments and increased pressure to generate more income, administrators are increasingly challenged to seek additional sources of external revenue. More specifically, schools are seeking generated revenues such as ticket sales, NCAA and conference distributions, contributions, and concessions, rather than allocated revenues such as student activity fees, direct governmental support, and direct institutional support (NCAA, 2022a). While clearly an outlier among women's collegiate volleyball programs, Nebraska volleyball generated more than $2 million in ticket revenue during the 2021 season, twice the revenue of any other women's volleyball program, demonstrating the potential viability of the sport to be self-sustaining (Akabas, 2023).

Nebraska volleyball's success in driving revenue, along with prominent women's basketball programs such as South Carolina, UConn, and Louisville, as well as programs such as Oklahoma softball or Utah women's gymnastics, suggest women's sports may be a legitimate revenue source for college athletic departments (Fink et

al., 2002; Kallam, 2010; Martinson et al., 2015). As Morehead et al. (2021) suggest, however, not all college athletics departments view event ticket sales with an eye on maximizing profits. As the researchers noted, some college athletics administrators and coaches would rather keep ticket prices low in order to maximize attendance, fearing high ticket prices would drive away potential attendees. In fact, some NCAA Division I institutions do not require tickets at all, believing free admission will grow program legitimacy by enabling events to attract the largest size crowds possible, theoretically creating a greater home court advantage and aiding in player recruitment (Stensland & Bass, 2017).

As Morehead et al. (2021) note, different stakeholders may have conflicting perspectives on this phenomenon; the volleyball coach may prefer to not charge admission because he/she wants as large a crowd as possible, while the department's chief financial officer might prefer to charge admission because ticket revenue may offset operating expenses. Thus, stakeholder theory provides an appropriate lens from which to view this query. Emerging from the business literature, stakeholder theory espouses firms are not solely beholden to their shareholders (and thus should only be driven to deliver profit), but to all stakeholders that enable an organization to operate successfully, such as employees, suppliers, and customers (Freeman, 1984). Several authors have noted the applicability of stakeholder theory to modern college athletics departments where a variety of stakeholders, such as coaches, administrators, donors, and athletes, may seek organizational objectives other than maximizing revenue (Huml et al., 2018; Morehead et al., 2021; Schmidt et al., 2024; Stensland & Bass, 2017), typically the driving force behind professional sport organizations.

Of note in this discussion is that while many assume free admission to sporting events results in an increase in attendance (Smith, 2024; Morehead et al., 2021; Myran-Schutte, 2019; Stensland & Bass, 2017), research suggests this may not be true in some sport settings, such as minor league baseball (Paul et al., 2009). Numerous sport demand studies, as summarized by Krautmann & Berri (2007), have pointed out sports tickets are often priced in the inelastic portion of the demand curve, implying increases in ticket price do not necessarily have an inverse relationship with attendance. Virtually none of these prior sport demand studies, however, examine the impact on attendance when the cost of entry is free. In a handful of studies examining patronage of the arts, some evidence has suggested free admission does not necessarily equate to greater attendance (Akadele & King, 2006; Luksetich & Partridge, 1997).

What prior sport demand studies have found is several factors have a significant relationship with sport event attendance (Borland & Macdonald, 2003; Schreyer & Ansari, 2022). Variables, such as environmental factors (game date, event promotion, etc.) or match competitiveness factors (team/opponent quality, historical success, etc.), have been found to impact event attendance in a variety of contexts. Traditional sport demand studies enter a combination of independent variables in a regression model to determine factors possessing a significant relationship with attendance. To date, the only examinations of collegiate women's volleyball attendance have either utilized fan surveys to (a) determine intrinsic motivations (Zapalac et al., 2010), (b)

identify barriers to attendance (Mayer, et al., 2017), or (c) have included volleyball with other collegiate women's sports in demand modeling (Shackelford & Greenwell, 2005).

The primary purpose of the current study is to determine whether allowing free admission to collegiate women's volleyball matches results in improved attendance, when controlling for a variety of other factors. Such a finding will provide college athletics stakeholders with an improved understanding of which factors to anlayze when deciding whether to ticket or not. NCAA Division I women's volleyball provides an ideal context for this investigation, given that many programs charge admission while a significant number do not. A secondary goal of this study is to determine what other factors may impact demand for women's collegiate volleyball aside from whether a department charges admission, in line with prior demand studies in other (predominately male, high revenue) sport settings. Thus, the current investigation seeks to answer the following two research questions:

> *RQ1*: What factors are significant drivers of attendance for NCAA Division I power women's volleyball programs?
> *RQ2*: Does ticketing at the NCAA Division I power level have a significant relationship with fan attendance for women's volleyball?

Different stakeholders within college athletics seek a variety of organizational objectives. In regard to collegiate women's volleyball, some stakeholders seek revenue in the form of gate receipts, while others seek to maximize live attendance, a phenomenon explored in prior work by Morehead et al. (2021) and Stensland and Bass (2017). Yet no prior research has empirically examined whether the process of charging admission conclusively achieves one of these stakeholder objectives at the expense of the other. In a sport that is growing rapidly in popularity, such as NCAA Division I women's volleyball, a more nuanced understanding of the impact of charging admission on event attendance could have a large impact on the administration and maturity of the sport.

Literature Review

General Sport Demand Literature

Factors which affect game attendance have long been an important consideration in sport management literature. Borland and Macdonald (2003) and Schreyer and Ansari (2021) have summarized the general findings of such sport demand studies. In trying to better understand consumer behavior, Byon et al. (2013) posited market demands may be context-specific, suggesting core market demand may include such factors as team performance, star players, or competitiveness, which are largely out of the control of marketers. They also noted, however, peripheral factors representing controllable aspects of an event experience, such as venue amenities, customer service, scheduling, and elements related to profit margins, such as ticketing and promotions, can also play a key role. In the majority of sport demand studies, the pri-

mary factors driving spectator attendance can be categorized into some form of four significant areas: (a) consumer preferences and game-related variables (e.g., intrinsic motivations, specific game marketing tactics, etc.); (b) time/environmental variables (e.g., day of the week, start time, venue attributes, etc.), (c) performance-related variables (e.g., home and opponent strength metrics, game outcome uncertainty, etc.), and (d) home market/economic variables (e.g., ticket price, household income, etc.; Schreyer & Ansari, 2021; Shapiro et al., 2021).

Among these categories of variables, no prior studies have managed to capture all elements. In many cases, authors either elect to capture intrinsic motivations of attendees (typically through the use of spectator surveys) or utilize secondary data to examine external market and event factors such as competitor quality or venue attributes. While ticket price is likely an important influence on sport demand, it is frequently not included in modelling because of a lack of accurate data or due to too many price points, as well as researchers not knowing how many attendees received complimentary tickets, possess season tickets, or bought tickets on the secondary market. In the 195 sport demand studies examined by Schreyer and Ansari (2022), only three had a specific focus on the relationship between ticket price and attendance.

Demand for (Collegiate) Women's Sport

Schreyer and Ansari (2021) called specifically for more demand modelling studies within women's sport, which is vastly underrepresented in the literature. Specific to profit motive in women's sports, Qian et al. (2023) found economic considerations (i.e., ticket price, concession price, and licensed commodities price) were a determining factor for future attendance at a women's professional tennis event, and suggested dissatisfaction in event pricing could be a sign of an endowment effect due to value incongruence between the event organizer's willingness-to-accept and attendees' willingness-to-pay. Similarly, Mumcu et al. (2016) found entertainment price was one of two significant predictors of intent to consume women's sporting events. In fact, some have suggested lower ticket costs should serve as an effective marketing point of differentiation among women's sports (Fink et al., 2002).

To our knowledge, no prior authors have conducted a demand study specifically investigating attendance within collegiate women's volleyball. Shackelford and Greenwell (2005) did conduct a demand study using a small number of relatively non-traditional independent variables (e.g., number of professional sports teams within a 50-mile radius of the athletics department) to examine attendance at several collegiate women's sports, including volleyball. Prior work utilizing fan surveys has suggested attractiveness of the competition and attachment to the sport do positively predict ticket purchases for collegiate women's volleyball spectators, while market demand factors such as game promotion and affordability have a significant positive relationship with both attendance frequency and season ticket ownership (Zaplac et al., 2010). In addition, Zapalac et al. found an even split of male and female attendees, who were primarily Caucasian (57%), with a mean age of 32.7, and predominantly supporting the home team (85%), although the majority of attendees

were single (51%), students (41%), and attending with a friend (36%). Respondents received free admission (59%), had attended 1-2 matches so far that year (42%), and did not spend any money on concessions (39%) or merchandise (over 90%). Mayer et al. (2017b) investigated non-attendance decisions for women's volleyball among a sample of college students and cited financial cost as a reason why students never attended a match.

Stakeholder Theory and College Athletics

Creating positive benefits for, and satisfying the needs of, various internal and external contingents is the goal for most organizations, a premise defined by stakeholder theory (Freeman, 1984). Prior to Freeman's work, Friedman (1962) had suggested in a capitalistic environment, the only stakeholders a firm should satisfy are shareholders; in other words, the primary concern for firms should be maximizing profit. Freeman (1984) astutely articulates, however, if other organizational stakeholders are not accounted for and satisfied, the organization could very well cease to exist or operate. In organizations such as collegiate athletics departments, which are non-profit organizations rather than for-profit, competing stakeholder groups will often vie for managerial priority, a process called stakeholder salience (Huml et al., 2017; Mitchell et al., 1997). Within intercollegiate athletics, important stakeholder groups that are often identified include athletes, prospective students, current students, alumni, faculty, community members, and administrators (Putler & Wolfe, 1999). However, it is also important to differentiate between internal (i.e., supply-side) stakeholders who schedule, market, and price events, as opposed to external (i.e., demand-side) stakeholders who purchase tickets and attend games. Competing stakeholder groups will utilize power, legitimacy, and urgency to build relationships which can help lead to their causes and goals being realized by management. Furthermore, taking time to investigate trends and understand factors important to demand-side stakeholders is important to organizational success, especially in an intercollegiate athletics environment that is increasingly relying on generated revenue.

In some of the earliest utilizations of stakeholder theory related to ticketing policies in intercollegiate athletics, Covell investigated season-ticket holders in both ice hockey (2004) and football (2005), finding that stakeholders with strong attachment and allegiance impact athletic policy, which may include ticket purchase decisions. Both Morehead et al. (2021) and Stensland and Bass (2017) have also examined the concept of ticketing for college athletics sporting events through the lens of stakeholder theory. Morehead et al. (2021), in particular, found competing stakeholder groups within college athletics departments sought different objectives when it came to the key decision-making process of setting ticket prices. In interviews with representatives of various internal stakeholder groups, they identified four objectives for setting ticket prices: (a) revenue-orientation or maximizing profits, (b) patronage-orientation or ensuring ticket affordability to as many as possible, (c) operations-orientation or balancing revenue generation with maximizing attendance, and (d) attendance-orientation or a singular focus on maximizing attendance, with no

regard for revenue generation. Their work clearly demonstrates college athletics administrators must make decisions regarding ticket pricing that may not satisfy all stakeholder groups. Such decisions have clear implications for athletics departments, including economic sustainability, but also reputation and legitimacy among external groups such as season-ticket holders, department donors, and recruits (Stensland & Bass, 2017). The common assumption in these studies is that charging admission for less popular sports will likely drive down already low attendance, which would fail to satisfy key internal stakeholder groups such as coaches and marketers, and may negatively impact athletes as well.

Sport Ticketing – Paid Versus Free Admission

In general, the ticketing landscape for intercollegiate athletics is complex, with many different methodologies, practices, policies, and price points to generate revenue, while still operating under the NCAA model of a non-profit organization (McEvoy et al., 2013; Morehead et al., 2017). The topic of ticket sales in the collegiate environment has grown in recent years. For example, using a case study of one athletic department considered to have a successful ticket sales program, Bouchet et al. (2011) provided propositions for improving sales operations and revenue in college sport. Additional investigations of sales operations have found proactive outbound ticket sales efforts have led to increased revenue (Popp et al., 2019), and in-house ticket sales teams outperform third-party models for ticket sales within intercollegiate athletic departments (Popp et al., 2020). Research regarding ticket sales for specific areas of college venues have also intensified, especially for high-yield premium seating (Mayer et al., 2017a; Mayer, 2023).

The concept of pricing for live events has become increasingly sophisticated over time, with the implementation of demand-based variable ticket pricing and dynamic ticket pricing models. However, it is still common for many universities to utilize fixed ticket pricing, in the form of a "general admission" sales approach, where a static price is set for each game throughout the season without any differentiation based on opponent, day of the week, time of day, promotions, or other predictable factors known to impact attendance (Drayer et al., 2014). This general admission sales approach is particularly common in collegiate "non-revenue" Olympic sport settings such as softball, soccer, and volleyball. In some cases, when administrators consider reputation, legitimacy, value, and facility capabilities, they may decide to not charge admission at all for some sport events (Stensland & Bass, 2017). For example, while certain conferences and institutions, such as the Big Ten and Texas A&M, have sought to capitalize on all potential gate revenue regardless of magnitude (Wolverton, 2007), other schools such as Duke (n.d.) and Ole Miss (2018) only ticket for some sports, while instituting a blanket "free admission" policy for others.

To date, relatively little empirical research has investigated the relationship between a managerial decision to require tickets for entry and future event attendance. Paul et al. (2009) found no significant relationship between free ticket promotions and attendance at minor league baseball games, but several significant positive re-

lationships with other promotional variables such as fireworks shows, post-game concerts, and merchandise giveaways. Akdede and King (2006) suggested among patrons of live theater the distribution of free tickets did not improve attendees' willingness-to-pay for a future ticket. Furthermore, they found the distribution of free tickets had a negative correlation to paid attendance per performance in large cities, suggesting a free ticket did not increase attendance, and ultimately devalued the theatrical performance. Muller and Arthur (2008), on the other hand, suggested the distribution of free tickets to a greyhound racing track did result in a significant number of first-time attendees and netted a positive ROI when comparing patron's secondary spending within the venue compared to lost gate fees. Their investigation, however, failed to examine future attendance intentions or actions among those who received free entry. Therefore, from a stakeholder theory perspective it could be argued that free tickets may not necessarily have long-term stakeholder implications, thus reducing the likelihood to establish lifetime (or at least longer-term) customer value beyond the initial visit.

Summary

Within the sport management literature exists a robust examination of demand for live sport attendance (Borland & Macdonald, 2003; Schreyer & Ansari, 2021). While these studies examine a plethora of factors which predict sport attendance, very few of them examine women's sport and virtually none of them have examined the impact of free admission on drawing spectators. Due to a common but virtually untested assumption that offering free admission will draw more fans than the same event where admission is charged (Smith, 2024; Stensland & Bass, 2017), stakeholders within college athletics advocate for competing objectives when it comes to setting ticket prices (Morehead et al., 2021). As such, the current investigation is novel in that a traditional attendance demand model is developed for collegiate women's volleyball utilizing several common independent variables. Included in these variables, however, is also a measure of whether a college athletics department has elected to sell tickets to patrons or allow free entry. The results of such an examination could shed light on the financial and popularity impact of athletics administrators' decisions to ticket for collegiate women's volleyball.

Method

Data

To determine whether significant relationships exist between predictor variables (including the key metric of whether a department issued tickets for volleyball home matches) and home match attendance, a regression model was developed. Data for the model were collected from NCAA Division I schools in former "power" conferences (i.e., Atlantic Coast Conference, Big Ten Conference, Big 12 Conference, Pac-12 Conference, and Southeastern Conference) that sponsored volleyball during the 2022 season (Oklahoma State and Vanderbilt did not sponsor a women's volleyball team that season). All data were obtained from school, conference, or NCAA web-

sites, as has been common practice in previous college sport-based literature (e.g., Popp et al., 2019). The dataset does not include conference championships or NCAA tournament events, as well as neutral site events, as conferences and the NCAA may have predetermined ticketing policies for championship events (Morehead et al., 2017).

Variables

Multiple control variables were collected for the study. Based upon previous demand literature, the following groups of variables were utilized: (a) time/environmental variables, (b) game-related variables, (c) performance-related variables, and (d) home market variables (Shapiro et al., 2021). Day of game, time of game, and distance between schools were included when examining the time/environmental variables. Game-related variables included conference affiliation and promotional activities, as listed on team schedules. Performance-related variables included team rankings, prior season performance data, and a measure of match competitiveness. Finally, market-related variables included venue capacity and ticketing policies. All variables, sources, and literature precedent can be found listed in Table 1.

Table 1

List of Variable Data, Sources and Justifications

Time and Environment Related Variables			
Variable	**Definition**	**Source**	**Justification**
Day of Game	Day of week in which the game is played: either weekend or weekday	Team Websites	(Falls & Natke, 2014; Popp et al., 2018; Shapiro & Drayer, 2012)
Time of Game	Time of day in which the game is played: either day time (9 AM-5 PM) or night game (after 5 PM)	Team Websites	(Falls & Natke, 2014; Popp et al., 2018; Shapiro & Drayer, 2012)
Proximity	The geographical distance between institutions. Proximity was classified by 3 distinct groups: Short distance, (<50 miles apart), moderate distance (50< *n* <150 miles), long distance (>150 miles)	Google Maps	(Falls & Natke, 2014; Forrest et al., 2002; Popp et al., 2018; Shapiro & Drayer, 2012)
Game Related Variables			
Home Team Conference	NCAA Conference of which the home institution is a member	Conference Websites	(Falls & Natke, 2014; Paul et al., 2012)
Away Team Conference	NCAA Conference of which the visiting institution is a member	Conference Websites	(Falls & Natke, 2014; Paul et al., 2012)

Promotions	Marketing strategies to drive attendance (giveaways, theme games, discount days, or senior day)	School Website	(Kappe et al., 2014)
Attendance	Total number of match attendees as reported by the home institution	Box Scores of individual games	(Popp et al., 2019)
Performance Related Variables			
Home Team 2022 Final Ranking	Home team's NCAA RPI ranking for the 2022 season	NCAA Statistics	(Coates et al., 2014; Fort, 2004; Humphreys & Miceli, 2020; Paul et al., 2012; Rottenberg, 1956; Schreyer & Ansari, 2021)
Away Team 2022 Final Ranking	Home team's NCAA RPI ranking for the 2022 season	NCAA Statistics	(Coates et al., 2014; Fort, 2004; Humphreys & Miceli, 2020; Paul et al., 2012; Rottenberg, 1956; Schreyer & Ansari, 2021)
Home Team Ranking from Previous Season	Home team's NCAA RPI ranking for the 2020-2021 season	NCAA Statistics	(Coates et al., 2014; Fort, 2004; Humphreys & Miceli, 2020; Paul et al., 2012; Rottenberg, 1956; Schreyer & Ansari, 2021)
Away Team Ranking from Previous Season	Away team's NCAA RPI ranking for the 2020-2021 season	NCAA Statistics	(Coates et al., 2014; Fort, 2004; Humphreys & Miceli, 2020; Paul et al., 2012; Rottenberg, 1956; Schreyer & Ansari, 2021)
Competitiveness of Match	Teams with RPI rankings within 25 places of one another will be considered a close match	NCAA Statistics	(Coates et al., 2014; Fort, 2004; Humphreys & Miceli, 2020; Paul et al., 2012; Rottenberg, 1956; Schreyer & Ansari, 2021)
Market Related Variables			
Stadium Capacity	Number of seats within an arena	Team Websites	(Price & Sen, 2003; Rottenberg, 1956)
Ticket Policy	Whether an institution tickets or does not ticket for admission	Team Websites	(Falls & Natke, 2014; Fort, 2004; Price & Sen, 2003; Rottenberg, 1956)

Results

Descriptive Statistics

Data were collected from a variety of school, conference, and NCAA websites (*see Table 1*) resulting in 859 individual game observations throughout the 63 power schools participating in women's volleyball during the 2022 season (an average of 13.6 home matches per team). A total of 26 individual matches were excluded from the analysis because box scores indicated zero attendees. Descriptive statistics illustrate that of the remaining 833 volleyball matches, 630 (75.63%) required a ticket for admission. Throughout the 2022 season, the power institutions averaged 1,800 volleyball fans (*SD* = 1,747). Of note, the attendance data collected from individual institutions for the 2022 season was as expected when comparing post-COVID trends from the 2021 and 2023 seasons. As evidence, the average home attendance for each conference from the 2023 season was led by Big 10 schools averaging 3,626 attendees, followed by Pac 12 schools averaging 2,077, Big 12 averaging 1,910, SEC averaging 1,772, and ACC schools averaging 1,187 (NCAA, 2023). When accounting for the steady increase of live attendees since the pandemic (including record viewers for the 2023 season), this suggests a reliability of data when considering year-over-year comparisons of data compiled by the NCAA. Institutions which sold tickets had an average of 2,165 attendees (*SD* = 1,855) while those not selling tickets had an average attendance of 669 (*SD* = 406). For schools which charged admission, season ticket prices ranged from $25 to $180 (excluding any minimum donation requirements), with a mean price of $63.63 (*SD* = $33.88). Individual match ticket prices were publicly available for 36 programs, ranging from $5 to $35, with a mean of $11.64 (*SD* = $6.77). Additional descriptive statistics are listed in Table 2.

Statistical Analysis

Prior to constructing the statistical model, a correlation matrix was created to determine significant correlations and to minimize multicollinearity among variables. Variables that demonstrated significant statistical collinearity and resulted in variance inflation factors (VIFs) larger than 10 were removed from the regression model. A random effects regression model was utilized for statistical analysis as each individual game cannot be considered as independent of one another. A standard linear regression model would not be sufficient as an assumption of the linear regression is independence across observations and this necessitates a more sophisticated model to account for game-by-game similarities and ensure that each game is nested within an institution. Each institution was assigned a numerical school ID to prevent the independence assumption from being violated (Jensen, et al., 2020). The research questions were answered utilizing a random effects regression model with all performance-related variables, team-related variables, and market-related variables to fully understand what quantitative factors are related to attendance.

Table 2

Descriptive Statistics for 2022-2023 NCAA Division I Volleyball Season

Variable	Measure	Count (%) (N = 833)	*M*	*SD*	Min, Max
Time & Environment Related Variables					
Close Schools (<50 miles)	Binary	25 (3.00%)			
Middle Distance (50<n<150)	Binary	58 (6.96%)			
Large Distance (>150 miles)	Binary	752 (90.28%)			
Day Game	Binary	369 (44.30%)			
Night Game	Binary	464 (55.70%)			
Weekday Game	Binary	449 (53.90%)			
Weekend Game	Binary	384 (46.10%)			
Game Related Variables					
Attendance	Continuous		1800	1747	30, 16833
Promotion Game	Binary	430 (64.08%)			
Discount Night	Binary	121 (18.39%)			
Giveaway Game	Binary	148 (22.06%)			
In-Conference Game	Binary	579 (69.51%)			
Senior Night	Binary	50 (7.45%)			
Theme Game	Binary	306 (45.60%)			
Performance Related Variables					
Home Team 2022 Rank	Continuous		70.65	57.35	1, 223
Away Team 2022 Rank	Continuous		87.50	72.01	1, 334
Close Match	Binary	226 (27.20%)			
Home Previous Season Rank	Continuous		64.86	56.36	1, 236
Away Previous Season Rank	Continuous		63.91	57.43	1, 236
Market Related Variables					
Stadium Capacity	Continuous		8074	5246	950,24535
Ticket Policy	Binary	630 (75.63%)			
Season Ticket Price	Continuous	539 (64.71%)	63.63	33.88	25, 180
Single Game Ticket Price	Continuous	494 (59.30%)	11.64	6.77	5, 35
Single Game Group Price	Continuous	345 (41.41%)	4.08	1.36	1, 7
Single Game Youth Price	Continuous	310 (37.21%)	4.66	1.55	1, 8

Note: N for continuous variables that do not have a listed count is 833.

Variable Selection

Variables were selected for the random effects regression model to limit collinearity through the utilization of a correlation matrix and the calculation of VIFs for the model. In determining the relationship between ticketing and attendance, the Pearson Correlation coefficient was calculated utilizing an $\alpha = .05$. Close distance and large distance were utilized in the model to capture both groups of institutions within 50 miles of one another and greater than 150 miles of one another. The middle-distance range, greater than 50 miles and less than 150 miles, was eliminated due to a strong, negative correlation ($r = -0.958$) to long distance schools and a moderate, negative correlation to the close distance schools ($r = -0.378$; Cohen, 1988). Additionally, to simplify the model, limit collinearity, and improve data reliability, the binary variable of "promotions" was selected to encompass all promotional events, rather than breaking into the individual categories of giveaways, theme game, discount games, or senior games. Binary variables including weekend vs. weekday games, and day vs. night games, were selected based on a positive correlation with attendance. Weekend games had a weak, positive correlation with attendance ($r = 0.037$) while night games also had a weak, positive correlation with attendance ($r = 0.093$; Cohen, 1988).

Findings

The results of the random effects model suggested a significant proportion of the total variation in attendance can be predicted utilizing: (a) home and away team ranking during the 2021 and 2022 seasons, (b) the differences in previous year rankings, (c) the difference in current season ranking, (d) if the schools were in the same conference, (e) proximity of schools, (f) date and time of game, (g) ticketing policies, (h) promotions, and (i) stadium capacity. The R^2 value of the model was 0.343, thus indicating approximately 34% of the variation in attendance was explained by the model and suggests a strong correlation (Cohen, 1988). The model included 523 matches, producing a k value of 34.87, indicating a statistically valid sample size. The average attendance when all multiple variables are equal to 0 was 2,761 and is statistically different from 0 ($z = 5.39$, $p < .001$). The mean VIF for the model was 1.62, ultimately determining the model does not have significant collinearity. The regression model, including partial standardized slopes and confidence intervals, can be found in Table 3.

Among the predictor variables in the model, six had a statistically significant relationship with attendance. The 2022 home team ranking was significant and had a negative relationship (ß = -7.381, $p < 0.014$), meaning that for every place the home team improved in ranking, attendance increased by 7.4 fans. (The highest rated team in the rankings was giving a value of 1, the second-best team a ranking of 2, etc., meaning lower numbers equaled a higher ranking, thus the inverse relationship.) Similarly, the away team ranking in both 2021 (ß = - 1.654, $p < 0.045$) and 2022 (ß = -2.792, $p < 0.001$) were also both significant and negative, suggesting for every place the away team's 2021 ranking improved, attendance rose by 1.7 fans and for every place the away team's 2022 ranking improved, attendance rose by 2.8 fans.

Table 3
Final Predictive Model

Variable	Unstandardized Coefficient	Standard Error	*z*	*P*
Home Team Rank 2021	-3.695	3.507	-1.05	0.292
Home Team Rank 2022	-7.381	3.005	-2.46	0.014*
Historical Ranking Difference	-4.613	4.538	-1.02	0.309
Away Team Ranking 2021	-1.653	0.825	-2.01	0.045*
Away Team Ranking 2022	-2.792	0.839	-3.33	0.001*
Match Up Ranking Difference	1.627	1.173	1.39	0.165
Weekend Game	147.869	110.688	1.34	0.182
In-Conference Game	-186.657	132.376	-1.41	0.159
Night Game	148.661	115.413	1.29	0.198
Close Match	94.879	115.174	0.82	0.410
Close Proximity Schools	1782.618	342.004	5.21	<0.001*
Large Proximity Schools	-395.767	178.458	-2.22	0.027*
Promotion Game	246.464	100.084	2.46	0.014*
Capacity	-0.0048	379.801	-0.17	0.868
Ticketing	558.618	379.801	1.47	0.141
Constant	2761.059	512.7054	5.39	<0.001*
**Significant at the 0.05 level*			*N*	523
			R^2	0.3432
			Average VIF	1.62

A match between opponents who were located fewer than 50 miles apart was a significant, positive predictor of attendance (ß = 1782.618. $p < 0.001$), while a match between opponents who were located more than 150 miles apart was a significant, negative predictor of attendance (ß = -395.767, $p < 0.027$). In other words, close opponents resulted in 1,783 more fans, while opponents located far from each other resulted in 396 fewer spectators. Finally, when departments held a promotion in conjunction with the match, it had a significant, positive relationship with attendance (ß = 246.464, $p < 0.014$), meaning promotional nights had nearly 250 more fans in attendance.

Of primary interest to this current study, whether a team ticketed home volleyball matches was not a statistically significant predictor of attendance at the .05 level. The unstandardized coefficient was positive and suggests an increase of 559 per home match when tickets are required to enter, but the lack of statistical significance suggests this result may be due to chance.

Discussion

A common assumption among college sport administrators is that ticket price may be a barrier to attendance and if that barrier is removed, attendance will be greater than if the barrier remains in place (Mayer et al., 2017b; Morehead et al., 2021; Stensland & Bass, 2017). If this assumption is true, these prior studies suggest various college athletics stakeholders will hold conflicting objectives in terms of a decision to sell tickets for athletics events. Among intercollegiate athletic administrators, it is likely that marketers want to see the largest crowd possible, while business officers may want to maximize ticket revenue. Stakeholder theory (Freeman, 1984) would suggest all stakeholder perspectives are relevant and different groups will attempt to leverage the tools of power and legitimacy to achieve their organizational goals. Yet little empirical work has actually examined the assumption that free tickets for a lower cost sporting event would indeed drive attendance when controlling for other demand variables. In one of the few comparative studies in this area, Paul et al. (2009) found free tickets were not significantly related to greater attendance in minor league baseball. The results of this study provide administrators with another analysis to resolve these conflicting stakeholder perspectives.

To determine whether free tickets will increase attendance within collegiate women's volleyball, it must first be determined what other common variables impact demand. Thus, the initial goal of the current study was to determine the statistically significant drivers of attendance in NCAA Division I women's volleyball. Unlike prior research, the current study accounts for numerous control variables in order to ultimately isolate the statistically significant drivers. The random effects model developed in this study provides a significant addition to the current body of literature by isolating factors athletic administration stakeholders can control in addition to immutable variables. Home and visiting team strength had positive and statistically significant relationships with attendance, similar to college football demand (Paul et al., 2012). Promotional activities including discount games, theme games, giveaways, and senior days, as previously suggested by Kappe et al. (2014), also had a statistically significant positive relationship with attendance, and have also been identified as a fan experience factor that may influence stakeholder re-patronage (Morehead et al., 2021). The strongest relationship between attendance and a variable in the model was the proximity of schools to one another, as previously noted by Popp et al. (2018) and Shapiro & Drayer (2012). When schools competed with opponents located within 50 miles of one another, attendance increased by more than 1,700 fans. Many of these close-proximity matches were played between long-standing rivals (e.g., North Carolina vs. Duke, Michigan vs. Michigan State, Southern Cal vs. UCLA), which drew significantly more attendees, although in reality, only a limited number of major college programs have an opponent located within 50 miles of their campus. Unlike previous research focusing on revenue generating sports, conference games, stadium capacity, and date- and time-related variables were not statistically significant factors impacting fan attendance (Popp et al., 2018; Shapiro & Drayer,

2012). College athletics administrators, marketers, and coaches control game day promotional activity and non-conference scheduling. These two elements appear to potentially influence match attendance and suggest the importance of regional rivalry in collegiate volleyball. These results imply that as college conferences realign and the distances between conference schools grow, one impact could be a detrimental effect on attendance in sports such as volleyball. It also demonstrates that administrators and coaches who schedule more regional non-conference opponents (and potentially cultivate rivalries) are likely to see greater audiences, sometimes exponentially so, perhaps in part by drawing in stakeholders from the visiting institution. It was somewhat surprising to see day and time variables were not predictors of demand as those variables are often significantly related to sport attendance. One possible explanation for this could be women's college volleyball is a fall sport which competes in the same season as football. Volleyball teams tend to play fewer Saturday matches (a popular day for sport spectating) and may compete with both college and professional football for viewers on weekends, which may limit weekend attendance, meaning a smaller gap between weekend and weeknight demand.

Once a demand model was constructed, the primary goal of the current study was to determine whether the choice by administrators to ticket for home volleyball matches was related to match attendance. The final statistical model revealed a positive correlation; however, it was not a statistically significant relationship, a finding echoing the work of Paul et al. (2009). If the decision to ticket an event is not significantly related to attendance, institutions may be missing out on potential revenue, which in turn could be utilized to better market and promote the sport (Shackelford & Greenwell, 2005). As Muller and Arthur (2008) illustrated, if the decision to allow free entry results in greater sport event attendance, lost ticket revenue could be offset by greater spending in ancillary areas such as concessions or merchandise. However, the current study suggests the simple act of allowing free entry for major Division I volleyball does not have a statistically significant relationship with attendance.

Ultimately, the decision to ticket or not to ticket is a reflection of the values and revenue goals of the department, as espoused by various stakeholder groups (Morehead et al., 2021; Stensland & Bass, 2017). However, the current results suggest perhaps some stakeholders are misguided in their assumptions that a lack of ticketing will result in an increase in attendance. Of course, resources are necessary to provide the services required to create an effective ticketing experience for consumers, such as providing ticket sellers, scanners, and ushers or venue security. Based on these factors, the decision by administrators of whether to ticket must be made in the context of other resource expenditures and will be different from institution to institution.

To illustrate this last point using the data collected for the study, we created two hypothetical budgets (see Table 4). Within the current dataset, the school reporting the largest attendance without selling tickets drew 17,302 fans during the 2022 season, an average of 1,331 fans per game (13 home games). Hypothetically, if 300 of those attendees were given complementary tickets (e.g., player families), and all other fans paid an average of $10 per ticket, the athletics department would generate

$134,020 in ticket revenue for the season. In this scenario, we suggest the athletics department might employ eight additional staff for each of the 13 home volleyball matches at an estimated cost of $80 per staff member per match, reducing ticket revenue by $8,320, creating a net profit of $125,700 in ticket revenue. On the other end of the spectrum, another institution in the data set drew 2,280 volleyball spectators over 10 matches during the 2022 season (228 per match). Hypothetically, if this institution also charged $10 per ticket and provided complimentary entry for 100 of the fans, per game, plus had additional staffing costs of $6,400 over the course of the season, they would generate $6,400 in net ticket revenue. While both programs in these hypothetical scenarios generate positive gains, for power (Power 4) athletics departments, the limited revenue in the second scenario may not be worth the additional effort and resource allocation to provide a ticketed event.

Table 4

Hypothetical Volleyball Ticket Budgets

	Team A	Team B
Actual avg. attendance per game	1,331	228
Estimated no. of comp tickets	300	100
Estimated avg. no. of paid tickets	1,031	128
Estimated cost per paid ticket	$10	$10
Home games	13	10
Total ticket revenue for season	$134,020	$12,800
Additional labor cost	$8,320	$6,400
Net ticket revenue	$125,700	$6,400

In summary, the current study contributes to the literature in multiple ways. From an applied perspective, the current study suggests factors such as opponent attributes (e.g., strength, distance from home team) and promotional activities can impact women's collegiate volleyball attendance, implying that internal stakeholders (i.e., administrators, marketers, coaches) should try to influence those attributes if they want to raise attendance. More notably, however, is that the decision to allow free admission does not appear to drive attendance when controlling for other factors, within NCAA Division I power (Power 4) women's collegiate volleyball. From a theoretical perspective, the results of the current study contribute to the literature by denoting that organizations balance the tenants of stakeholder theory with empirical evidence when assessing the influence of stakeholder power and legitimacy. Prior research (Huml et al., 2018; Morehead et al., 2021; Stensland & Bass, 2017) suggests organizations such as college athletics departments are often fraught with competing stakeholder objectives, which influence decision-making processes. As various stakeholder constituancy groups vie for power over decision-making processes, empricial analyses provide a scale to balance the three dimenions of stakeholder salience; (a) power, (b) legitmacy of claims, and (c) the urgency of required

actions (Huml et al., 2018). Of recent, the priorities of athletics departments are shifting dramatically to pursue revenue at every opportunity in order to meet the rising costs of a competitive Division I athletics program. This change will require various groups to re-examine their priorities and may even shift the attitudes of external stakeholders, such as fans and ticket buyers, who may accept that if they want their programs to be successful, it will come at a financial cost. The current results suggest data-driven decision making could help alleviate some stakeholder conflicts.

Limitations and Future Research

Under the current climate of big-time college athletics, revenue generation is taking on renewed and critical importance. Finding ways to generate more revenue from "Olympic" or "non-revenue" sports, even if those sports are not able to reach financial self-sustainment, is a high priority for athletics administrators. In the past, administrators and college sport researchers have not been proactive enough in this regard and have rarely utilized sophisticated modelling and algorithms to examine demand in sports other than football and men's basketball. This is likely to change in college athletics, particularly as other sports such women's basketball, women's volleyball, ice hockey, baseball, and gymnastics, among others, are growing in fan interest and displaying greater potential to make money. Greater research is needed to provide empirical analysis to help make decisions about the revenue-generating capability of all sports, not just football and men's basketball.

Unfortunately, one of the primary drawbacks of conducting this sort of research is the lack of transparent and reliable data among athletic departments. The current study scraped publicly available data, but it is impossible to gauge the accuracy of reported attendance on website box scores. As found by Popp et al. (2023), athletics departments which sell tickets often report the number of tickets distributed as opposed to the number of tickets scanned into the venue. In a perfect world, the current study would be conducted utilizing ticket scan rate data and accurate ticket price data, which would include complementary tickets utilized and prorated data for tickets purchased as part of season ticket package, in addition to single game ticket prices aggregated by price point. In addition, by definition, athletics programs which do not ticket for volleyball cannot produce ticket scan rate data, meaning some attendance numbers are generated from turnstiles or attendance clickers, or worse, from administrator estimates. While the current study is a step in the right direction, future studies can produce better recommendations when researchers gain access to more accurate data. To further understand the revenue capability for non-revenue sports such as volleyball, it would also be helpful to capture ancillary revenues (e.g., concessions, merchandise) to estimate per capita spending. Finally, this study admittedly did not capture survey data from attendees that could be utilized to develop analyses of their demographics or psychographics, which could be utilized to determine the reasons why they may have attended volleyball matches, as has been collected in prior work by Mayer et al. (2017b) and Zaplac et al., (2010). In addition to this study's analysis of secondary data, it is recommended that future research utilizes primary research methods in order to better understand the motivations of attendees at volleyball matches.

Additionally, the sole focus of the current study was on women's collegiate volleyball. A priori, we did not have strong justification to believe demand for women's collegiate volleyball is unique in regards to spectator demand compared to other sports. Our results, however, suggest perhaps some demand elements are specific to women's collegiate volleyball, or perhaps "non-revenue" or women's sports. For instance, rivalry games seemed to have an inflated impact on attendance, while the importance of day-of-the-week on demand was greatly diminished in the analysis. Future studies should examine this phenomenon to determine if demand is different from one collegiate sport to another, or between sport groups (e.g., revenue vs non-revenue, male vs female, etc.) to assess the generalizability of the findings. In addition, while attendance data was collected across multiple matches at a wide variety of institutions, the goal of this study was not to analyze what causes change in attendance over time, rather which variables explain the variance in attendance based on a variety of factors. However, future research is recommended to assess factors that may contribute to an institution's attendance increase or decrease from season to season. Finally, the statistical model utilized in this analysis combined "promotions" into a single category. Future research could delineate promotional activities to further understand if particular promotions, such as theme nights, drive attendance.

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JOURNAL OF INTERCOLLEGIATE SPORT

Identifying Barriers to Mental Health Care for Canadian Student-Athletes: A Narrative Review

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Canadian student-athletes and American college athletes face unique stressors related to their sport and have demanding schedules. Although there is limited research specifically focused on the mental health of Canadian student-athletes participating in university sports, existing studies indicate that Canadian student-athletes report increased levels of psychological distress and are more susceptible to mental health issues compared to the general student population. Despite this, many do not seek or receive the treatment they need. This study aimed to identify the barriers to mental health care for Canadian student-athletes competing in Canada. Using a narrative approach, participants identified barriers to mental health treatment, including cultural stigma and voluntary isolation, in addition to a lack of availability of mental health services and the suffering of Canadian student-athletes.

Keywords: mental health, Canadian interuniversity sport (CIS), USPORTS, student athletes, stigma

College athletes in the United States face internal and external demands to perform well in all aspects of the college athlete experience, leaving many to struggle with aspects of their identity (Mast & Gentile, 2019). With the undeniable sports-related and academic pressures, many college athletes experience psychological distress and fail to self-manage their mental health (Gulliver et al., 2012; Shannon et al., 2019). A significant area of concern for college athletes' mental health is the overwhelming influence the athletic environment and culture have on help-seeking behaviours. Currently, the views on mental health held by coaches, teammates, trainers and other stakeholders dramatically affect how athletes think about their mental health as well as their health decisions (Moreland et al., 2018).

The onset of mental health disorders appears to overlap with the time spent as a college athlete, with approximately 19.4% of individuals between the ages of 18 and 25 years experiencing mental health disorders (Ryan et al., 2018). Moreover, 75% of lifetime mental disorders are known to occur before the age of 25 (Brown, 2018).

Journal of Intercollegiate Sport, 2025, 18.3

A low prevalence of psychiatric disorders and adverse mental health in elite athletes has remained a widespread belief by healthcare professionals and the public for decades (Bär & Markser, 2013). However, mental health concerns in the college athlete population are not uncommon (Mast & Gentile, 2019). The culture of athletics often fails to recognize mental health concerns as a significant issue, while approximately one-third of the college athlete population experiences severe mental health concerns (Rao & Hong, 2020).

Most athletes have a profound sense of pride in their mental toughness, their ability to overcome setbacks and their aptitude to perform in high-pressure situations, leaving them conflicted upon experiencing adverse mental health concerns and calling into question the reputation they have built for themselves (DeLenardo & Terrion, 2014). Collegiate-level sports have a culture that does not cater to the athlete's vulnerability; instead, it idolizes and celebrates their strength while dismissing that they are human. A widespread assumption is that only those who are emotionally and psychologically the strongest can compete at the highest level, dismissing the possibility of adverse mental health or mental illness in elite athletes (Markser, 2011). College athletes remain vulnerable to psychological distress and mental health conditions while underutilizing available resources and support systems (Ryan et al., 2018). The American literature identifies significant barriers to mental health treatment for college athletes, highlighting the cultural and internal challenges faced when dealing with adverse mental health.

Crocker et al. (2021) suggest that Canadian university student-athletes share similar barriers to mental healthcare (for clarity and consistency, when referencing American literature, I will use the term 'college athlete,' and when referring to the Canadian context, I will use 'Canadian student-athlete'). However, the treatment options available for Canadian student-athletes and institutional services appear unexplored in the Canadian context. This paper will highlight the barriers to mental health care in Canadian student-athletes and demonstrate the importance of the athletes' perspective for decision-making in mental health treatment.

Canadian Student-Athlete Mental Health

Canadian university student-athletes share similar time commitments to those in the National Collegiate Athletic Association (NCAA), investing up to 40 hours per week in athletics while maintaining their academic obligations, yet they receive significantly fewer financial incentives, scholarship opportunities and media promotion to their American counterparts (Crocker & Duncan, 2020; Miller & Kerr, 2002). Canadian student-athletes are a unique population, given their sport-specific stressors, academic demands and increased time commitments (Van Slingerland et al., 2018). In Canadian university sports, Canadian student-athletes reported significantly higher levels of adverse mental health than the general student population (Sullivan et al., 2019). As an example, a study by Hammond et al. (2013) on Canadian university swimmers found that 68% of their sample of 50 collegiate swimmers preparing for the national championship had reported at least one major depressive episode as a Canadian student-athlete (Hammond et al., 2013). While there is limited literature

on mental health in Canadian university sports, the existing research highlights the reported mental health challenges and the high rates of psychological distress in the population (Pankow et al., 2021). Beyond acknowledging these increased rates, it remains unclear why Canadian student-athletes report psychological distress more than the non-athlete student population. With limited literature on mental health in Canadian student-athletes playing in Canada, this paper draws heavily from the literature on the American college athlete experience. While the American experience is different in many ways, the reported stressors and athletic experiences of Canadian Student-athletes are highly comparable to what is reported in the American literature.

Research on Canadian student-athletes and college athletes in the United States often attributes their adverse mental health to the stressors associated with their athletic participation. Although many college athletes are significantly impacted by the stressors associated with sports, the literature often overlooks the external factors outside their athletic roles. There are significant stressors that contribute to adverse mental health in the population, leaving them vulnerable to psychological distress and self-coping methods (Gucciardi et al., 2017). Significant athletic factors include injury, competitive failure, and academic eligibility (Van Slingerland et al., 2018). At the same time, separation from family, finances, and a loss of autonomy are considerable personal stressors (Gucciardi et al., 2017). The idolization of athletes creates unrealistic expectations and perceptions, not viewing public icons as "normal" people. Athletes experience the highs and lows of everyday life while navigating difficult situations and various emotions (Henriksen et al., 2019). Even for the best athletes, mental health is part of the human condition and the lived experience (Gucciardi et al., 2017).

Barriers to Care

With athletic departments and academic institutions investing in mental health treatment and facilities, college and Canadian student-athletes must be provided with adequate, evidence-based services (Gucciardi et al., 2017). Even with improved services and financial investments, there are significant barriers to effective mental health care in the student-athlete population. These barriers exist within the culture of athletics and the athletic department itself.

Stigma

According to Rao and Hong (2020), the most significant barrier for college athletes seeking mental health care is the stigma associated with mental illness and mental health disorders. This has created an environment in which college athletes avoid mental health treatment because of fear of public perception and has made pursuing treatment options problematic for many. Gulliver et al. (2012) highlight this issue, reporting that 40% of interviewed college athletes considered stigma the most significant barrier to seeking help. Stigma in mental health is broadly defined as the negative perception, disgrace or disfavouring by a community of individuals in psychological distress or suffering from mental illness (Abdullah & Brown, 2011; DeLenardo & Terrion, 2014; Rao & Hong, 2020). Issues of social and self-perceived

stigma are significant barriers to mental health treatment for college athletes, with a common concern of appearing weak to teammates and coaches (Gulliver et al., 2012).

For many, the perception of weakness or utilizing a mental health therapist could be detrimental to their athletic identity (Barnard, 2016). Brewer et al.. (1993) define this as the extent to which an individual identifies themselves with the athlete role while seeking recognition from others. For example, Watson and Kissinger (2007) found that 36.9% of American college athletes believed that mental health problems should be dealt with away from sports and not revealed publicly. The most significant external perception in the eyes of college athletes is that of their coaches and teammates. This is possibly the most important barrier to seeking mental health support in college athletes, as the perceived external stigma from those close to the athlete is an obvious deterrent (Rao & Hong, 2020). The team culture in which the athlete exists is reminiscent of a family environment, where the teammates and coaches are considered some of the most influential people in the athlete's life (Cutler & Dwyer, 2020). Under these circumstances, they do not want to appear weak and unreliable, often remaining silent about mental health concerns in fear of negative perception from their peers and creating the perceived inability to perform athletically (Cutler & Dwyer, 2020; DeLenardo & Terrion, 2014).

Services Offered for Mental Health Treatment

Stigmatization of mental health issues and the lack of awareness of mental health services are significant deterrents to help-seeking in college athletes, but many wish to explore treatment options further. According to Gulliver et al. (2012), a considerable barrier to service utilization is a lack of knowledge about available resources and where to access them. Since most college athletes are only aware of options within their athletic department, they are unaware of services outside the athletic context and available to the general student population (Leimer et al., 2014). Services such as sports psychology are beneficial for sports-related improvements but leave those seeking specific mental health care dissatisfied and at risk for further distress. This lack of satisfaction stems from inadequate resources available to college athletes (NCAA Goals Study, 2020; Sudano & Miles, 2017).

As part of their athletic participation, college athletes are often provided with access to services, including physiotherapy and sports psychology (Gulliver et al., 2012). Most athletic departments boast strong physical and athletic therapy programs for their athletes, and with increased interest in athlete mental health, academic institutions are investing in improved mental health services, facilities, and staffing (Cutler & Dwyer, 2020). In college sports, the team physician is the primary medical resource for athlete mental health, overseeing basic mental health needs and coordinating treatments (Rao & Hong, 2020). In this role, the team physician is positioned to detect early adverse mental health symptoms within the athletic context (Rao & Hong, 2020). Although the sports medicine physician is positioned as the first line of intervention for the athlete, they do not have the specialized training to provide thorough evaluation and treatment for the athlete's mental health concerns (Tomalski

et al., 2019). Furthermore, many athletic departments and universities lack the facilities or personnel to manage athlete mental health independently and compel their athletes to seek intervention from campus counselling services or external resources (Gill, 2008).

Collegiate athletic programs are overseen by the same governing bodies, but there is a lack of consistency and uniformity in the services and treatment options available to college athletes (Sudano & Miles, 2017). Across universities in both Canada and the United States, the resources dedicated to counselling and mental health treatments are predicated by the athletic department's funding levels. As a result, institutions with larger budgets can ensure their athletes receive better mental healthcare treatment options and access to more healthcare professionals (Kroshus, 2016). Although there is a lack of uniformity in mental health services across the Canadian student-athlete and college-athlete populations, sports psychology is the most utilized and cited mental health service reported in the literature (Moreland et al., 2018). This is the service of choice for most athletic departments, as the appointments address performance optimization and the athlete's mental well-being (Gorzynski et al., 2020). This approach views the individual from the athletic perspective. It aims to improve athletes' mental strength, teaching them to remain psychologically strong while pushing their performance limitations (Hägglund et al., 2019). Sports psychology also manages the general well-being of the athlete by addressing the cultural, environmental, and individual factors experienced in the sporting context (Gorzynski et al., 2020). These services might benefit Canadian student-athlete and college-athlete performance, but they fail to support those needing clinical mental health intervention.

The demand for clinical services by this population has led to the creation of new treatment options for university and college athletes with significant mental health problems. The introduction of sports psychiatry offers specialized clinical treatment for those suffering from mental illness and provides treatments such as medication, counselling, and cognitive behavioural therapy (Shannon et al., 2019). These treatment practices enable the implementation of psychiatric methods in the context of sports, addressing sports-specific disorders and general mental health concerns (Markser, 2011). While sports psychiatry is a promising and essential step forward in the healthcare services for athletes, it is unclear how many academic institutions utilize these practitioners and the overall success rates of such services. Additionally, the literature has failed to explore and report the data for mental health service utilization and the specific services offered in university athletics. This is particularly evident in Canadian literature, leaving the demand for mental healthcare unclear and outlining a desperate need for evaluation and future exploration.

Despite the higher reported rates of adverse mental health in the Canadian student-athlete population, the literature on available services and treatment utilization in the Canadian context is limited (Van Slingerland et al., 2018). Further exploring the impact of mental health on Canadian student-athletes in Canadian universities is crucial. It is imperative to examine the challenges, opportunities, and resources accessible to them to enhance their overall experience. This will facilitate the identi-

fication of areas that need institutional enhancements and guarantee the availability of adequate mental health services for all.

Method

Employing a narrative method, this study contrasts the current literature on obstacles to mental health care for Canadian student-athletes with participants' personal experiences, highlighting specific challenges in seeking help among Canadian student-athletes competing in Canada. To extend the Canadian literature, the research questions guiding the inquiry were: 1) What are the perceived barriers to mental health care for Canadian student-athletes in Canadian universities; and 2) How do the perceived barriers impact help-seeking behaviours in Canadian student-athletes?

This study is informed by symbolic interactionism, a robust micro-level theoretical framework that identifies various interactional contexts that structure social behaviour (Carter & Fuller, 2015; Roe et al., 2010). These contexts include identity, the narrative setting, the interpretation of situations, and participants' discourse, which can provide value to studying mental health care (Roe et al., 2010). A symbolic interactionist framework provides insight into key factors in mental health care to better understand mental health stigma and the utilization of this service. Furthermore, symbolic interactionism emphasizes the cultural and social experiences that shape responses to mental health care, treatment options, and the role of mental health stigmatization (Link et al., 2015; Roe et al., 2010).

Applying narrative inquiry as a research methodology, the research questions can best be addressed by exploring participants' lived experiences through the art of storytelling. Narrative inquiry prioritizes the researcher's and participants' connection, providing a rich and in-depth understanding of individuals' sociocultural and lived experiences (Clandinin & Caine, 2008; Haydon & Van Der Riet, 2016; Smith & Sparkes, 2012). It provides a secure and confidential space for individuals to disclose their personal stories and experiences. Through establishing a bond with the researcher, participants can feel at ease and assured when sharing their narratives, leading to a more profound comprehension of their experiences (Clandinin & Caine, 2008; Haydon & Van Der Riet, 2016; Smith & Sparkes, 2012). By exploring these experiences in great detail, scholars can gain a profound understanding of the circumstances surrounding the narratives and study them on a more intimate level (Clandinin & Caine, 2008; Haydon & Van Der Riet, 2016; Smith & Sparkes, 2012).

As the author of this article, my experience as an athlete is relevant to this research project. I have spent thirteen years participating in elite amateur and professional sports and three years as a Canadian student-athlete. This background gives me a deeper contextual understanding of the themes explored in this paper and the difficulties and challenges each participant presents. My personal experiences as an athlete have had a significant impact on my research. These experiences and 'insider' perspectives on athletic culture have become central to my research and shaped the methodological approach, interview questions and how the data is analyzed.

Data Collection

Using my connections as a former athlete, participants were recruited through email outreach to athletic department administration, coaches and Canadian student-athletes who have previously expressed interest in student-athlete mental health through interviews and awareness programs. The recruitment process began with interviewing three Canadian student-athletes from two Canadian universities. An additional eleven Canadian student-athletes from five Canadian universities were later recruited based on recommendations from the initial participants. Snowball sampling is often employed as an effective tool for conducting qualitative research and obtaining access to 'hidden populations' (Noy, 2008). This sampling technique was highly effective in an athlete population where mental health is stigmatized. The total participant pool was comprised of eight women and six men student-athletes from various Canadian universities across sports such as track and field, cross country, soccer, rugby, volleyball, and baseball. Upon selection, the participants were provided with a letter of information outlining the project and screened to meet the guidelines outlined by the University Research Ethics Board. To be eligible for this study, participants were required to 1) be a Canadian university student-athlete, 2) have self-identified mental health struggles in their time as a student-athlete, and 3) have participated in at least one sporting season at the university level.

Data collection was completed through the online communications tool Zoom in a private and password-protected video call. Interviews lasted 90 minutes on average and were audio recorded with participant consent. The interviews were semi-structured in formatting, using a pre-approved question list but leaving room for further investigation and interpretation by the participant. The open-ended questions examined multiple facets of the Canadian student-athlete experience to understand the athlete's mental health and the circumstances around their experiences. The latter part of the interview guide was concerned with the barriers to mental health care, their knowledge of existing services, and areas they would like to improve.

Data Analysis

Upon completion of the interviews, the audio recordings were transcribed by the researcher and stored in individual participant files using pseudonyms. Using narrative analysis, the personal narratives were examined to understand the differences in participants based on their unique circumstances (Floersch et al., 2010; Simons et al., 2008; Zelcane & Pipere, 2023). The narratives were then organized by coding transcriptions, building a set of themes within individual narratives and across participants (Riessman, 2007). Inductive thematic narrative analysis was later used to explore the data and identify commonalities in participant experiences, attitudes, and health-seeking behaviours. According to Riessman (2007), this type of analysis strongly emphasizes the "told" aspect of the narrative, which refers to the content of speech about events and thoughts. Such narrative methods provide meaningful contextual experiences across participants while acknowledging the external factors that influence the athlete's sense of self and personal narratives (Carless & Douglas, 2009; Smith, 2010). Following a thorough thematic narrative analysis, three key

themes were identified in the narratives shared by the research participants. These themes were then compared to the available literature and contextualized to the Canadian experience. Thus, this narrative approach aims to outline distinct barriers to mental health care and services for Canadian university athletes and identify areas of improvement from the participants' lived experiences.

Results

The following sections will outline narrative excerpts from individuals showcasing the challenges faced in accessing mental health care. Canadian student-athletes identified three primary themes: voluntary isolation, stigma from external perceptions, and barriers to care. Additionally, they pointed out that therapists' lack of understanding of Canadian student-athlete's unique needs hindered their ability to obtain appropriate care.

Voluntary Isolation

When looking at mental health concerns and service utilization by Canadian student-athletes at Canadian Universities, it is important to understand the factors that shape their decision-making and attitudes toward help-seeking. All Canadian student-athletes are enrolled in an academic program of choice, participate in different sports, and maintain a customized schedule - shaping their unique experiences as student-athletes. However, the essence of the Canadian student-athlete experience is extremely similar for most. All Canadian student-athletes experience comparable stressors away from their personal lives, including the social, academic and athletic challenges associated with varsity sports. Athletes must manage their academic responsibilities while dealing with sports-specific concerns such as injury, pressure to perform and excessive time commitments to sports-related activities (Ryan et al., 2018; Van Slingerland et al., 2018).

The shared experience of academic and athletic stress may make Canadian student-athletes hesitant to voluntarily isolate themselves, which poses a significant barrier for individuals experiencing adverse mental health. During the data collection, athletes were asked to identify the cultural and social barriers to seeking mental health support in their athletic environments. A focal point in many participant accounts was the concern of needing support when their peers did not. Track athlete Kelly explained it:

> You don't want to be that person when everyone else on the team seems fine. You don't want to be the person that's like, "I'm struggling." Because that's kind of what you signed up for to be 100% a student and 100% an athlete, but I think everyone needs help at some point or another.

From their first day on campus, the Canadian student-athletes were quickly introduced to the lofty expectations placed on them while working in an environment with unrealistic time commitments and obligations. While facing similar challenges to their teammates, athletes in psychological distress may choose to ignore their symptoms and avoid seeking help for fear of appearing less capable than their team-

mates or not as mentally tough (Delenardo & Terrion, 2014). Maria, a soccer player, shared:

> I think just because you don't want to seem like you're struggling while everybody else seems that they're doing really well and able to handle it and that you're just maybe not fit enough mentally. But being fit mentally is not something you're trained for, so when you notice that you're struggling, it seems that nobody else does, especially if nobody openly talks about it. It really makes you feel inadequate, like you shouldn't have a place on the team that you're not good enough to be on the team. And then maybe you should quit.

Feelings of isolation and weakness are particularly evident when the athlete compares their experiences with adverse mental health to their peers. This self-perception of inadequacy heavily affected Maria, calling into question her sense of belonging to her team and her abilities as a soccer player. Nina, a university-level soccer player, also presented similar concerns:

> You can see that you are struggling or that you're not performing very well. Not even necessarily due to lack of talent, but due to, you know, mental health struggles on the field and off the field. You worry you won't get that playing time…you feel inadequate as long as you're struggling with school on top of everything else. You feel like you talk yourself out of opening up. it's like the same thing in class when you have a question, but nobody else puts their hand up to ask a question. So, you just don't ask a question.

Even though there is a lack of emphasis on mental health in athletic culture, athletes are aware of their collective challenges. There is an unspoken bond among Canadian student-athletes - a familiarity with experience, struggles and perception of their role on campus. Within the population, the athletes are aware that adverse mental health is a considerable problem, yet those involved look down upon anything other than stories of success or overcoming struggle. Julia, a rugby player, explained:

> I think a lot of people are struggling, but they don't know how to go about it. They don't know what they're supposed to do. And they kind of just suffer in silence. But I think for a lot of them, it isn't because they don't realize how serious it is. They don't realize the reality of struggling. They think that's just the way it has to be. It's so, like, toxic because you have to be this strong superhuman person all the time to go and beat someone up on the field or to go run around for hours on end.

Despite the prevalence of mental health concerns in the Canadian student-athlete and college-athlete population, only one-third of the population seek out help for their problems (Rao & Hong, 2020). Julia attributes self-managing experiences of poor mental health to the expectation of mental strength and the normality of suppressing emotional and psychological distress. This ideology of mental toughness perpetuates negative attitudes and stereotypes toward athletes suffering from adverse mental health (Rao & Hong, 2020), further contributing to the "toxic" culture outlined by Julia. An emphasis on physical performance and mental toughness leaves an athlete vulnerable to adverse mental health, as hiding insecurities and vulnerability remains

easier than the fear of ridicule and stigmatization. Despite the need for increased mental health awareness and service utilization, a clear barrier to help-seeking in Canadian student-athletes and college athletes remains the perceptions toward mental health within the population and the fear of voluntary isolation among their peers. Even in the same boat as their peers, openly struggling is not yet an option.

Stigma

Internalized stigma towards help-seeking was prominent among participants, with external attitudes and norms shaping their feelings toward mental health. These internalized attitudes are shaped by more prominent and normalized external perceptions of athlete mental health and the stigma associated with help-seeking behaviours. Athletes are taught to be physically strong and mentally resilient; however, vulnerability to adverse mental health is associated with weakness and character deficiencies (Delaenardo & Terrion, 2014). While the internal conflict of vulnerability acts as a significant barrier to care, the culturally held attitudes toward mental health in sports and the associated external stigma are a substantial barrier to all Canadian student-athletes and college athletes. When asking participants to elaborate upon the cultural barriers to seeking mental health support in their athletic environments, the concern of stigma was obvious to track and field athlete Stephen:

> Yeah, I think it's definitely a stigma in sports, which, again, is good that it's changing. But I feel like that's just always been the athlete mentality, like to play your sport, you have to be really hard and really tough. And just kind of suck it up. So I think that this stigma, in general, just prevents a lot of people from opening up about what they've dealt with.

Stephen shed light on the normalized "athlete mentality" of dealing with adversity privately in the name of mental toughness and athletic expectations. Athletic culture has a high standard of commitment to the athlete's organization, coaches, and teammates while emphasizing a win-at-all-costs attitude. Displays of vulnerability or perceived weakness from an athlete can cause coaches and teammates to lose trust in the individual and question their ability to participate at the required level (DeLenardo & Terrion, 2014). This concern was highlighted by track and field athlete Alexa:

> I think the barrier would be the fear of being ostracized. Also, I would think it's the fear of being told that you can't compete because you're struggling with mental health…I think there's just a lot of things that people do that kind of makes them feel ashamed as an athlete to speak up. But I think just those small things do present a barrier because they're ashamed to talk about it with their coaches, because maybe they think that their coaches would lecture them on not treating their body well. Or maybe they think that their coaches or the trainers would become worried and not let them play until they have it figured out.

Those struggling with mental health concerns or mental illness are often aware of the stigma attached to their experiences (Crabtree et al., 2010). In this case, the perceptions of coaches and teammates are critical to the Canadian student-athlete, highlighting the damaging potential for vulnerability in a group setting that is not

culturally accustomed to these issues (Rao & Hong, 2020). This is consistent with the symbolic interactionist perspective that suggests an individual sense of self is influenced and shaped by the views that others have of them (Crabtree et al., 2010; Gergen, 1977; Mead, 1934). For many, it is in the best interest of their athletic career to stay silent about their mental health struggles, leaving a large number of athletes to mask their stress, find unhealthy coping mechanisms and allow mental health disorders to go untreated. This was emphasized by female volleyball athlete Rebecca. Highlighting how even for those in need of support, a negative external perception discouraged the Canadian student-athlete:

> I would say the biggest challenge is probably the social context. Basically, it's the perception of others. So, whether you are competing on a team where the athletes don't seem open, or you're worried that they're going to see you differently, or if you're worried the coaching staff or admin staff will see you differently, I think that's the biggest issue.

Rebecca highlighted the fear of perception as a considerable barrier to seeking help. The problematic nature of under-reporting mental health concerns in elite-level sports has created the misconception of the minimal prevalence of mental health disorders in the population (Bär & Markser, 2013; DeLenardo & Terrion, 2014). These misconceptions are built on displays of toughness and overcoming adversity from our culture's most idolized and celebrated athletes. Cross-country athlete Michael emphasized the impact of his role models:

> I mean, a big thing is a lot of people treat athletes such as Kobe Bryant and Michael Jordan as role models. But I'm pretty sure Kobe Bryant played a part of the game with a broken finger. So, things like that is what I mean where, if you're playing basketball, you probably shouldn't be playing with a broken finger. But then people will see things like that and say, well, if he can play through that, I can just keep going. I feel like since certain athletes ended up being role models, for a lot of the student-athletes playing today, those ideals are kind of still ingrained in these populations.

Through their lived experience, participants identified stigma as the most significant barrier to mental health treatment. As a result, the population is at increased risk of untreated mental health disorders and unhealthy coping mechanisms. The fear of social exclusion and lost playing time makes the topic of mental health uncommon in the athletic setting and among peers. Therefore, the help-seeking behaviours of Canadian student-athletes are heavily influenced by the anticipated backlash of disclosing their vulnerabilities and the stigmatization of weakness perpetuated by the problematic norms celebrated in athletic culture.

Obtaining Mental Health Services

Overcoming the barriers of negative perceptions and stigmatization is a crucial step in Canadian student-athletes receiving the mental health care that they need. While current literature highlights the underutilization of mental health services in the population, an unfamiliarity with available services or inadequate services discourages many individuals wishing to receive care (Bird et al., 2018). Canadian Stu-

dent-athletes are often offered athlete-focused solutions such as sports psychology. However, treatment options aimed at providing mental healthcare on a personal level were missing at many institutions. The lack of resources and support appeared to be a point of frustration for several participants. Julia, a Rugby player, mentioned:

> They (Julia's sports psychologist) say they're a counsellor, and they only want to talk to you about how you feel about taking balls around the field. Like, that's so stupid. It makes no sense. It's because they're scared to talk about it (mental health). And they don't actually want to put the resources into it, and they don't care. They don't think mental health is nearly as important as performing on the field or your physical health. They really would much rather tape up your knee and send you back out there than actually ask if you're okay. It literally took me having a panic attack at practice, laying on the floor and not being able to breathe for people to check on me and take my mental health seriously.

When Julia was suffering from mental health concerns, she was directed to the departmental sports psychologist for care. The recommendations from medical staff and an unfamiliarity with sports psychology left her bitterly disappointed with the care she received. Despite prior knowledge of an athletic-focused approach to care, the psychologist failed to address her symptoms and understand her on a personal level. They were leaving her mental health concerns unresolved and perpetuating her existing problems.

The disappointment felt by Julia in her experience with a sports psychologist highlights a disconnect between the Canadian student-athletes and the administration's perception of mental health care. At an institutional level, administrators believe that general student counselling and access to sports psychologists are adequate resources for Canadian student-athletes and college athletes to address their mental health concerns (Moreland et al., 2018). At the athlete level, this is highly contested. Noah, a men's baseball player, explained:

> I think the general culture (athletic department) is one that thinks they promote mental health awareness. But I think that the execution fails, it's not necessarily as supportive as people think. I do know that there are sports psychologists out there, but they aren't trained to help the mental health of athletes…most people that I know, that have seen sports psychologists it's not really for their personal mental health issues. It's more for, like, their pre-competition jitters and that they aren't performing to their best.

Young athletes are exposed to a variety of complex life and sport-specific stressors. Identity development, new academic demands and increased levels of sporting competition are significant stressors in the athlete population (Markser, 2011). Many of these concerns extend past the scope of sports psychology and require specialized mental health services. Yet the availability of these services is limited. With low rates of sports psychology utilization in athletic departments, administrators may be unprepared to fund further specialized mental health services (Reardon & Factor, 2010; Sebbens et al., 2016). This leaves Canadian student-athletes to utilize existing sports-specific resources or explore external care options. However, a lack of knowl-

edge of resources and where to find them is a significant barrier to care. Female rugby athlete Julia explained:

> Therapy is so inaccessible. When you're in athletics, you don't know about the other resources that are around campus. Now, I see a therapist through the Student Wellness Center; I had no idea they even did that or that it was free or accessible. Like none of that because they don't tell you any of that in athletics. They don't say if you need to see this person, or if you go to this place, there's this specialist. They don't tell you any of that. I had no idea about any of the support or anything that I could have gotten away from athletics.

Many academic institutions have a distinct separation between academics and athletics, with athletic departments appearing distinct and private from the rest of the university. This separation encourages Canadian student-athletes to utilize resources within the athletic department while failing to explore services external to athletics (Watson & Kissinger, 2007). Julia explains that despite a lack of resources to treat her mental health concerns within the athletic department, the administration staff failed to provide her with resources aimed at the general student population. This concern was not unique to Julia. Niko, a track and field athlete, also discussed his frustration by stating:

> The university student health program was where I was able to find a lot of the resources that I needed. But yeah, it was never directed by athletics. At the Student Health Program, I felt like I was just being passed off from doctor to doctor. This is not necessarily ideal because I felt like I was opening up about my entire life and the experience that I was going through every single time I met a new doctor.

These Canadian student-athletes highlight the problematic nature of help-seeking and the available services for student-athletes in Canadian universities. Issues of sufficiency, inaccessibility and the failure to address the athlete's concerns external to sports outline the challenges associated with help-seeking and future treatment utilization. Their narrative accounts and opinions on their health care demonstrated an apparent disconnect between athletics and campus health services, as well as the inadequacies for effectively caring for Canadian student-athlete mental health at a comparable standard to physical rehabilitation.

Discussion

A primary concern for participants was the self-stigmatization of their experience with adverse mental health. The perception of self was focused on struggling in an environment where nobody else appeared to be struggling. These concerns appeared to extend into participants' perspectives on mental health stigma and influence their storied responses. When speaking about stigma, the participants provided the hypothetical experience of the average Canadian student-athlete while using their own experience as a contextual reference point. From an interactionist perspective, individuals see themselves as meaningful social objects and understand their social

value based on the perspectives held by the wider community (Thoits, 2011). Moreover, the anticipation of negative perceptions and fear of potential negative outcomes can have a lasting impact on self-perception and drive future decision-making (Link et al., 2015). From this perspective, participants addressing mental health stigma through the hypothetical athlete may be a distancing technique to protect their sense of self.

Although athletes identified their need for mental health care, poor self-perception was exhibited in comparison to their peers - creating a fear of isolation and vulnerability because those around them appear to cope well when dealing with the same stressors and experiences. These concerns were focalized by Kelly, who recognized the problematic nature of isolating her struggles in an environment where public struggle is uncommon. This was also echoed by Nina, who acknowledged the likelihood that her struggles were the same as those of her peers, yet she was unprepared to go against the cultural norms and seek help.

The ideology of mental toughness and fortitude has shaped a culture of stigma, persistence, and private management of adversity (Rao & Hong, 2020). Despite Canadian student-athletes sharing similar stressors and experiences, the fear of vulnerability and isolation prevented many of them from seeking the help that they needed. The athlete population is exposed to personal, cultural, and environmental factors that can impact their mental health and require them to seek resources for adequate mental health care (Gorczynski et al., 2020). Despite the low rates of symptom reporting and service utilization, the findings suggest that contextually appropriate resources should be proactively available for Canadian student-athletes to promote a culture of acceptance around mental health concerns.

The problematic nature of Canadian university and college-level sports has created the misconception of minimal prevalence despite evidence of adverse mental health and mental disorders in the Canadian student-athlete and college-athlete population (Bär & Markser, 2013; DeLenardo & Terrion, 2014). As a result, athletic departments and institutions currently lack an understanding of their athlete's needs and have limited resources to assist their athletes. With an emphasis on structural changes, mental health promotion and equitable care for all Canadian student-athletes, the culture around mental health in sports needs to become more accepting and promote help-seeking behaviours. Currently, the cultural and self-stigmatization of athletes appears to be a driving force for avoiding mental health care. The fear of teammate perception, missed playing time, and the loss of trust from coaches and administration were cited as significant concerns for reporting adverse mental health. Many worried that appearing vulnerable or visibly struggling could harm their athletic career. Participants highlighted a clear desire to receive mental health treatment, but the process could be problematic for them in the athletic context.

To assist in providing for all facets of athlete care, the culture around mental health must be addressed at institutional and athlete levels. Administrators, coaches and training staff must be aware that the cultural norms and behaviours adopted by their athletes are heavily influenced by the attitudes and opinions of their leaders (Moreland et al., 2018). Athletic departments and staff must normalize the conversa-

tions around mental health and be willing to provide and promote adequate resources for treatment while encouraging education and mental health literacy for all involved to normalize seeking mental health care and support (Henriksen et al., 2019). According to the perspective of symbolic interaction, culture establishes conditions for people's actions but does not outright determine them (Blumer, 1962; Hier, 2005). People do not act towards culture or social structure itself; rather, they react to specific situations. Social organization only proves effective when it shapes situations in which people act and provides concrete sets of symbols that people use to interpret their situations (Blumer, 1962; Hier, 2005). Thus, improving treatment options and increasing utilization of mental health services must begin with addressing the cultural and societal barriers faced within the athletic culture. Furthermore, there must be a focus on mental health treatment that is specific to athletic participation and the athletic culture, which would reduce negative self-stigma and isolating behaviours that influence poor mental health. By normalizing the discussion around mental health and encouraging service utilization with athlete-conscious practitioners, our Canadian student-athletes will thrive both on and off the field.

Participants highlighted resource utilization challenges, given their unfamiliarity with existing resources and their isolation from external sources. While participants were knowledgeable about sports psychology, the scope of care and treatment focus therein was unknown. Canadian student-athletes place immense trust in the resources and recommendations they receive from medical staff and administration to address their health concerns. The treatment experiences of an athlete like Julia highlight both disappointment and betrayal when mental health care is treated in the context of athletic performance. For those in need of mental health care, they were left to search for resources external to their athletic departments. However, this appeared to be problematic – again exemplified by Julia, who described her struggle with seeking mental health care, and specifically therapy, as inaccessible for those on the university campus. Although inaccessibility is an institutional concern and an overwhelming reality for students on university campuses, Canadian student-athletes are left with a disproportionate level of accessibility to physical therapy in comparison to mental health resources. As a result, Canadian student-athletes had to wait months for mental health treatment through the university wellness center by a practitioner who was unfamiliar with the athletic context and stressors associated with collegiate athletics. Similar concerns were raised by Niko, who voiced frustration at the lack of consistency with his mental health care and how this could be discouraging for Canadian student-athletes who are apprehensive about seeking care.

Athletic departments, academic institutions, and administrators may feel that their services are adequate to meet their athlete's needs when used in conjunction with general university student services. However, many Canadian student-athletes in the research study revealed significant barriers to service utilization, were unaware of available resources outside of their athletic departments and reported substantial concerns when using general university services. To address the concerns of their athletes, institutions must create systems to ensure that all athletes have access to mental health treatments from at least one accessible university resource. For insti-

tutions that cannot provide athlete-specific resources, campus services must become familiar with coaches, training staff and athletes. Ideally, a sports-specific mental health practitioner would be employed at the university sports level to address the growing mental health concerns of Canadian student-athletes. While most take great pride in their athletic identity, the desire for mental health care in the student-athlete is increasingly apparent.

Limitations and Future Research

In this study, participants may have disclosed elements of their poor mental health while providing limited context about those experiences. Due to the sensitive nature of mental health and the associated stigma, participants held back information or minimized specific experiences. It's also crucial to consider the athletes' views on what they perceive as major mental health stressors. Many Canadian student-athletes struggled to identify whether their experiences indicated poor mental health, primarily due to a lack of mental health literacy. Moreover, participant anonymity posed a limitation in examining Canadian student-athlete's experiences. Many feared being identified through the details in their accounts, leading them to exclude significant information from their narratives. Although the participants provided valuable insights into their mental health struggles within Canadian university sports, these accounts only offer a snapshot into the reality of those involved as Canadian student-athletes.

Due to the limited research on the mental health of Canadian student-athletes, it is essential for researchers to continue exploring this field and deepen their understanding of the challenges this population faces. Future studies should continue to explore the major stressors affecting Canadian student-athletes and the obstacles they encounter in accessing effective mental health services. Expanding knowledge about the mental health of Canadian student-athletes can help drive policy changes and promote improvements in mental health support at universities. Achieving a thorough understanding that is well documented in the literature should be a priority, comparable to what is available for the mental health of college athletes in the United States.

Conclusion

The present study shows that Canadian university student-athletes face comparable obstacles to mental health care as college athletes do in the United States. Major barriers to treatment for Canadian student-athletes include voluntary isolation, cultural stigma, a lack of access to resources, and neglect of concerns beyond sports. This paper reveals critical cultural and institutional issues that deter Canadian student-athletes from pursuing mental health support. Even though participants articulated a strong need for mental health care, they often felt compelled to manage their struggles alone or look for help outside their teams, fearing backlash from teammates and coaches. While the experiences shared by these individuals do not fully capture the collective Canadian student-athlete experience, they underscore deep-rooted challenges within various institutions that influence help-seeking behaviors at Canadian universities.

These findings highlight how fostering an athletic culture that prioritizes open dialogue and values on and off the field while acknowledging athletes' humanity ahead of their performance is crucial for promoting mental health care and reducing stigma. Furthermore, encouraging help-seeking behaviour is essential to creating an environment that ensures Canadian student-athletes prioritize their mental health over elite athletic performance and academic success. By doing so, those involved directly with Canadian student-athletes can help promote and increase service utilization and ensure that athletes receive the care they need to thrive both on and off the field.

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The Evolving Demands and Resources of Live Entertainment: The Development of a Job Demands Resources Sport (JDRS) Model

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Utilizing the job demands resource (JDR) model, as a basis to learn and better understand the workplace experience of employees in live entertainment, we developed a model specific to sport. Through a three-stage process, the scale was measured and validated with collegiate sport employees. The first stage included subject matter experts (n = 69) openly listing job demands and resources in their workplace, then the second stage included two samples of employed graduate students (sample one: n = 101; sample two: n = 112), and finally phase three included two samples of collegiate sport employees (sample one: n = 249; sample two: n = 239). Based on the results, a job demands resources sport (JDRS) model was developed with nine of the 10 job demands relating to burnout, and all seven job resources relating to both work engagement and burnout. Theoretically and practically, the JDRS model will help sport employees and organizations identify opportunities to reduce burnout and increase engagement so they may better serve stakeholders.

Keywords: sport workplace; burnout; engagement; college athletics

Introduction

The relationship between employee well-being and job characteristics is complex and continues to evolve as the marketplace becomes more global, technology advances, and work structures change. Introduced in 2001, the most cited framework in occupational health is Demerouti and colleagues' job demands resources (JDR) model. The JDR model has revealed how job characteristics may lead to employee well-being and in turn influence job performance. While working conditions are specific to every occupation, the central idea of the JDR model is that working conditions can generally be categorized as either *job demands* or *job*

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resources (Bakker & Demerouti, 2007). Strains occur when an imbalance exists between job demands on the individual and the job resources (or lack thereof) to cope with such job demands (Bakker & Demerouti, 2007; Demerouti et al., 2001).

Job demands and resources have changed significantly as a result of alteration in work organization and work design. Recently, crises like COVID-19 abruptly thrusted organizations around the world to embrace changes in how, when, and where work was conducted (Malhotra, 2021; Van Steenbergen et al., 2018). In addition to essential personnel, live entertainment employees, particularly in sports, were some of the first to return to in-person work (see LoRè, 2020). Two years into the crises, Weaver (2022) called for a reinvention of the sport workplace due to the sheer exhaustion, disengagement, and burnout affecting the daily lives of sport employees.

For two decades, JDR researchers have conducted research across the world studying industries from public service to technology (Lesener et al., 2019; Schaufeli et al., 2009); however, only one study has focused on the sport industry. Although Richardson and McKenna (2020) specifically focused on the experience of former professional athletes, the livelihoods of sport employees who sell, market, produce, and manage the live entertainment experience are still unknown. With the demanding stakeholder groups, unfavorable work schedules, and time demands that encourage extreme pressures to perform competitively, engagement in high-volume travel, production of highly commercialized live entertainment, and long non-traditional hours (Dixon & Bruening, 2005; Hall et al., 2010; Weaver, 2022) the sport landscape is ripe to extend and explore the JDR model. Although Schaufeli and colleagues (2009) believe the JDR model is applicable "irrespective of occupation" (p. 894), we argue that the live product of competition seven days a week combined with multi-media rights dictating when games will be played, and the constant job mobility of talent having to move from city to city necessitates sport managers utilize a sport-specific JDR model. As a form of entertainment, sport is played live and broadcasted through multi-media platforms; however, even in a time of changing media landscape, many sport organizations do not own their own channels, so the time of the game, and sometimes the day, are dictated by their multi-media rights deals meaning sport employees are at the discretion of the media company not their employer (Leiker, 2021).

With this in mind, the current study not only addresses a gap in the literature, but it also extends the research by creating the first custom reliable tool to measure job demands and resources in the sport landscape. The overall objective of the study was to create a job demand resource sport (JDRS) model that could be used by sport employees and organizations in an effort to better understand the experience of employees in the sport workplace.

Literature Review

To help understand the manifestation of job demands and resources in the context of sport, the study draws from sport workplace literature specifically drawing more from the collegiate sport literature, then introduces the JDR model and JDR scholarship, revealing the evolution of the model and the need for the model in sport.

Sport as a Distinct Context

Although research examining employee workplace experiences spans numerous industries (e.g., Demerouti et al., 2001; Lesener et al. 2019; Schaufeli et al., 2009), the sport industry provides a distinct context. Employees of sport organizations commonly face high workplace demands including constant media attention, long hours, multiple live events, heavy travel schedules, career mobility, stakeholder scrutiny, and extreme pressure to influence young adults to perform whether they are athletic administrators, coaches, athletic trainers, or advisors (Darvin, 2020; Eason et al., 2019; Graham & Smith, 2022; Hatfield & Johnson, 2012; Mazerolle et al., 2008; Morrow & Howieson, 2018; Rubin, 2017; Rubin & Huml, 2023; Schenewark & Dixon, 2012; Smith et al., 2021; Taylor & Wells, 2017; Weight et al., 2021). Most recently, these demands have been exacerbated because of the COVID-19 pandemic, newly negotiated multimedia deals that often dictate the time and day of competition, and conference realignments that increase distances traveled for competitions (Paule-Koba, 2022).

Depending on the commercialization, working in sport may also differ contextually. Some may assume working in sport is the same regardless of level; however, that is not the case as there are nuanced differences in professional sport just as there are in intercollegiate sports (Wakefield, 2014). There are distinctions between the two, particularly regarding location, number of sports offered, and approval process. The National Collegiate Athletic Association (NCAA) has 1,066 member institutions, inclusive of 340 Division I institutions, distributed across the US (NCAA, 2022). As such, for career mobility within the NCAA Division I employees would have to leave the city and state to find an opportunity in the same industry. Additionally, the approval process for a non-for-profit coeducational model is intricate. Finally, collegiate space employees must serve multiple sports simultaneously. For example, for an institution like Harvard University, which offers 42 sports (Harvard, 2022), employees must serve, market, sell, coordinate facility usage and commercial travel for multiple teams year-round.

Constant Competition in Sport

The additional pressure of employees within the sport industry is a win-at-all-costs mentality, which can create an environment where employees are expected to prioritize work over everything, including their personal lives (Burton & Lieberman, 2017; Taylor et al., 2019, 2021). The overwork climate present in the industry, coupled with the pressures that exist within athletic departments to win and generate revenue can create an environment wherein veteran employees express regret about their decision to stay in the industry (Weight et al., 2021); citing missed experiences with family and friends, a lack of outside hobbies, and declining well-being. Much of the research that examines employee commitment and engagement focuses on ways to increase these employees' behaviors as the demands of employees in the sport industry are copious (Cunningham et al., 2005; Kent & Chelladurai, 2001; Turner & Chelladurai, 2005). However, work on the relationship between work engagement and addiction has found there is a "tipping point" where positive work engagement

turns to negative work addiction (Huml et al., 2021), suggesting a focus on over engagement may be problematic. Further, recent work by Taylor and colleagues (2019) illustrates that employees who possess high levels of workaholism (e.g., working excessive hours, taking on additional, uncompensated duties) are more likely to experience burnout. The commitments and expectations (e.g., workplace cultures) that come with these positions, coupled with the strain and ability of employees to repress the effects of these stressors may leave employees with few resources to help navigate the time demands of their professional duties and their personal/family lives (Bruening & Dixon, 2007; Dixon & Bruening, 2005; Dixon et al., 2008; Schenewark & Dixon, 2012).

Sport Identity

Sport employees have been found to have team identification, pride, and passion in their work not found in other industries (Swanson & Kent, 2015, 2017). The higher levels of team identification have impacted on their work motivation and organizational commitment (Anagnostopoulos et al., 2016; Oja et al., 2015; Swanson & Kent, 2015, 2017), which are both recognized positive outcomes of JDR. Specifically investigating how job resources such as community support, colleague support, professional development, open communication, or work-life flexibility may help increase sport employees' motivation, commitment, or engagement supports extension the JDR and sport identity literature.

Job Demands Resources (JDR) Model

Originally developed in 2001, Demerouti and colleagues (2001) devised the JDR model to explain the connection between job characteristics and employee well-being, specifically identifying the stress factors as *job demands* and *job resources*. Demands are the "physical, social, or organization aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs" (Demerouti et al., 2001, p. 501). Prevalent demand examples include performance pressure, time constraints, role conflicts, or workload. A decade into the line of research, Crawford et al. (2010) expanded the job demand definition and differentiated between challenging and hindering demand. Challenging job demands help promote an employee's growth and have been perceived to be opportunities to learn, whereas hindering job demands may impede an employee's growth and have been perceived as barriers (Crawford et al., 2010).

Contrary to demands, resources in the JDR model can be physical or social aspects of the job that allow a person to achieve their work goals, that help reduce psychological and physiological job demands, or that stimulate one's growth and development (Bakker & Demerouti, 2017). Several resources like job autonomy, flexibility, supportive colleagues, and supportive supervisors have had positive effects on employees' workplace experience (Bakker et al., 2007; Mauno et al., 2006). In general, most job resources foster positive organizational outcomes (Bakker & Demerouti, 2017) such as workplace engagement (Xanthopoulou et al., 2007a), organizational commitment (Hakanen et al., 2008; Richardsen et al., 2006),

self-efficacy (Richardsen et al., 2006), and employee well-being (Law et al., 2011; Xanthopoulou et al., 2007a).

The Evolution of the JDR Model

The earliest JDR research focused on the challenging aspects of work health. The central health indicator within the JDR model is burnout and is most often referenced as exhaustion. For example, Demerouti and colleagues (2001), revealed exhaustion occurred when a work-related goal required additional effort due to the presence of excessive job demands. Likewise, a lack of job resources hinders work-related goals and leads to disengagement. In short, burnout is mainly predicted by job demands, but also by a lack of job resources, whereas engagement is exclusively predicted by available job resources (Schaufeli & Bakker, 2004).

Examining the JDR model has been a salient endeavor for the past two decades. Stemming from the Demerouti and colleagues' original conception in 2001, Richardsen et al. (2006) evaluated the work of public service employees (i.e., police officers) and found that work engagement partially mediated the effects of individual characteristics, job demands, and job resources on organizational commitment and self-efficacy. By 2007, several researchers began exploring several other occupations, industries, and buffers indirectly affecting JDR. For example, in the technology industry Xanthopoulou and colleagues (2007a) revealed that personal resources (1) moderate the relationship between job demands and exhaustion, (2) mediate the relationship between job resources and work engagement, and (3) relate to how employees perceive their work environment and well-being.

Furthermore, Xanthopoulou et al. (2007b) discovered that job resources were stronger buffers of the relationship between emotional demands/patient harassment and burnout, compared to the relationship between workload/physical demands and burnout of those in the technology industry. In the public service industry, Halbesleben and Bowler (2007) extended Richardson and colleagues (2020) work and revealed that motivation mediates the emotional exhaustion–job performance relationship. Additionally, after evaluating teachers Bakker et al. (2007) suggested that job resources act as buffers and diminish the negative relationship between pupil misbehavior and teachers' work engagement. For example, cynicism mediates the relationship between job resources and performance suggesting that working conditions influence performance particularly through the attitudinal component of burnout (Bakker et al., 2008). That same year, Hakanen and colleagues (2008) evaluated the dentistry industry and revealed that job resources influenced future work engagement, which in turn, predicted organizational commitment, whereas job demands predicted burnout over time, and in turn predicted future depression. Van den Broeck and colleagues (2010) then extended the work in the public service industry to include customer service industry and revealed that job hindrances are associated positively with exhaustion (i.e., the main component of burnout) and negatively with vigor (i.e., a component of work engagement).

In the customer service industry, Van Jaarsveld and colleagues (2010) discovered customer incivility toward employees is related to employee incivility

toward customers through job demands first and then emotional exhaustion. Then, Law and colleagues (2011) broadly examined Australian income earners working in the private, government, and non-government sectors. They found the psychosocial safety climate as a lead indicator of workplace psychosocial hazards (high demands, low resources), psychological health and employee engagement, and as a potential moderator of psychosocial hazard effects. The motivations of school board employees were studied by Fernet et al. (2013) and they revealed specific job demands and resources are involved in both the energetic and motivational processes—given their relationships with psychological resources—and that they distinctively predict burnout components. Continuing in the education industry, Mérida-López et al. (2019) discovered emotional intelligence buffers the effect of emotional demands on work engagement through self-appraised stress of educators. Most recently in higher education, Barthauer et al. (2020) revealed doctoral candidates and postdocs' burnout is positively related to career turnover intentions and is a risk to their sustainable careers.

Although several modifications and extensions have been made to the JDR model (e.g., Bakker & Demerouti, 2017; Salmela-Aro & Upadyaya, 2018) three essential assumptions remain unaffected: (1) job demands predict burnout, (2) job resources predict work engagement, and (3) job resources impact burnout. From the public sector to the private sector, the JDR model has been applied and extended in the scholarship; however, one industry that has yet to be understood and is ripe to explore is sport, collegiate sport.

With a global economy worth $500 billion (Statista, 2022a, 2022b), and a projected growth rate of 41% (Statista, 2022b), sport is positioned well for exploration of the demands and resources. Under the umbrella of higher education sits collegiate sport employees, and while researchers have revealed incivility, workaholism, and turnover intentions (e.g., Cunningham et al., 2013; Darvin, 2020; Huml et al., 2021; Smittick et al., 2019; Taylor et al., 2019; Wells et al., 2014, 2020) exist in sports, it has yet to be researched. With the changing landscape of the workforce and business model of sport, most of the recent literature has focused on burnout, workaholism, and work-family conflict (e.g., Huml et al., 2021; Taylor et al., 2019; Weight et al., 2021), so it would be timely to unpack resources need to increase engagement.

The Scale Development Process: Method and Results

The scale development process was informed by Spector (1992) who recommends understanding the construct(s), designing the scale, pilot testing the items, administering the items and running item analyses, and validating and norming the scale. We followed this process in three stages involving one qualitative data collection ($n = 69$[1]) and four quantitative data collections ($n_{total} = 696$). Stage 1 was determining the scale content, during which the research team used a general

[1] The sample size is in the ballpark of other publications using qualitative data to inform scale development (e.g, $N = 10$ in Darvin et al., 2021, 2024, $N = 116$ in Gray et al., 2020). Our aim was to recruit a sufficiently large sample to identify common demands and resources in the collegiate sport industry for scale development. We acknowledge that we may not have reached saturation, where additional data would no longer generate new themes. It is likely that sampling more collegiate sport employees would reveal additional demands and resources. However, our goal was not to create an exhaustive list but rather to develop a measure of common demands and resources that can aid researchers.

inductive approach to identify the specific constructs (i.e., job demands and job resources in the collegiate sports industry) based on qualitative data from subject matter experts (SMEs; i.e., full-time collegiate sports employees). Stage 2 was item development and refinement, which involved designing the scale, pilot testing the items, administering the items, and running item analyses. Stage 3 involved running confirmatory analyses and examining validity evidence. The three-stage process of developing and validating the JDRS measures is summarized in Figures 1 and 2 ans well as described in depth below.

Stage 1 Method: Determining Scale Content

The first stage of scale development is gaining a clear understanding of the construct(s) the scale is intended to measure (Spector, 1992). As described in the introduction, existing literature suggests that sport employees face a host of job demands (e.g., long hours, heavy travel) and job resources (e.g., community support, work-life flexibility). To gain a deeper understanding of the job demands and resources faced by employees in the collegiate sports industry, a qualitative study was conducted to capture firsthand insights from subject matter experts (i.e., employees in the field). Seeking input from job incumbents is widely recognized as one of the most effective ways to understand the realities of a profession (Spector, 2021). Qualitative responses from SMEs can help researchers gain a clearer understanding of the constructs to be measured and have been used to inform a variety of scales (e.g., Darvin et al., 2024; Eby et al., 2004; Gray et al., 2020).

With the Job-Demands Resources Model as the theoretical framework guiding the scale, the research team conducted an open-ended online structured questionnaire. Participants were provided definitions of job demands and resources and asked to report those they had experienced. A thematic analysis approach outlined by Braun and Clarke (2006) was used to identify job demands and job resources from SMEs' responses (detailed in the Analysis section below). This approach helped to ensure that the scale covers constructs important to sports employees, and the scale items were based on real-world experiences.

Participants in Stage 1. Study 1 utilized a convenience sample of collegiate sports employees from the research team's networks. To be eligible, participants had to be at least 18 years old and work full-time in the collegiate sports industry. Recruitment was conducted via email. Between December 2019 and January 2020, 136 employees were invited to participate in a qualitative survey study. Of those, 69 completed the survey.

Participants ranged in age from 22 to 67 ($M = 39.08$, $SD = 12.54$). Approximately 54% of participants identified as male ($n = 37$), 42% identified as female ($n = 29$), and four percent did not report ($n = 3$). Fifty-five participants were White, six were Black or African American, four were multiple races, one was Asian, and three did not report their race. Collegiate sport employees worked at National Collegiate Athletic Association (NCAA) Division 1 colleges and universities ($n = 58$, 84%) as well as NCAA Division II colleges and universities ($n = 8$, 12%). Three employees did not report their university's NCAA division. Approximately one percent of employees

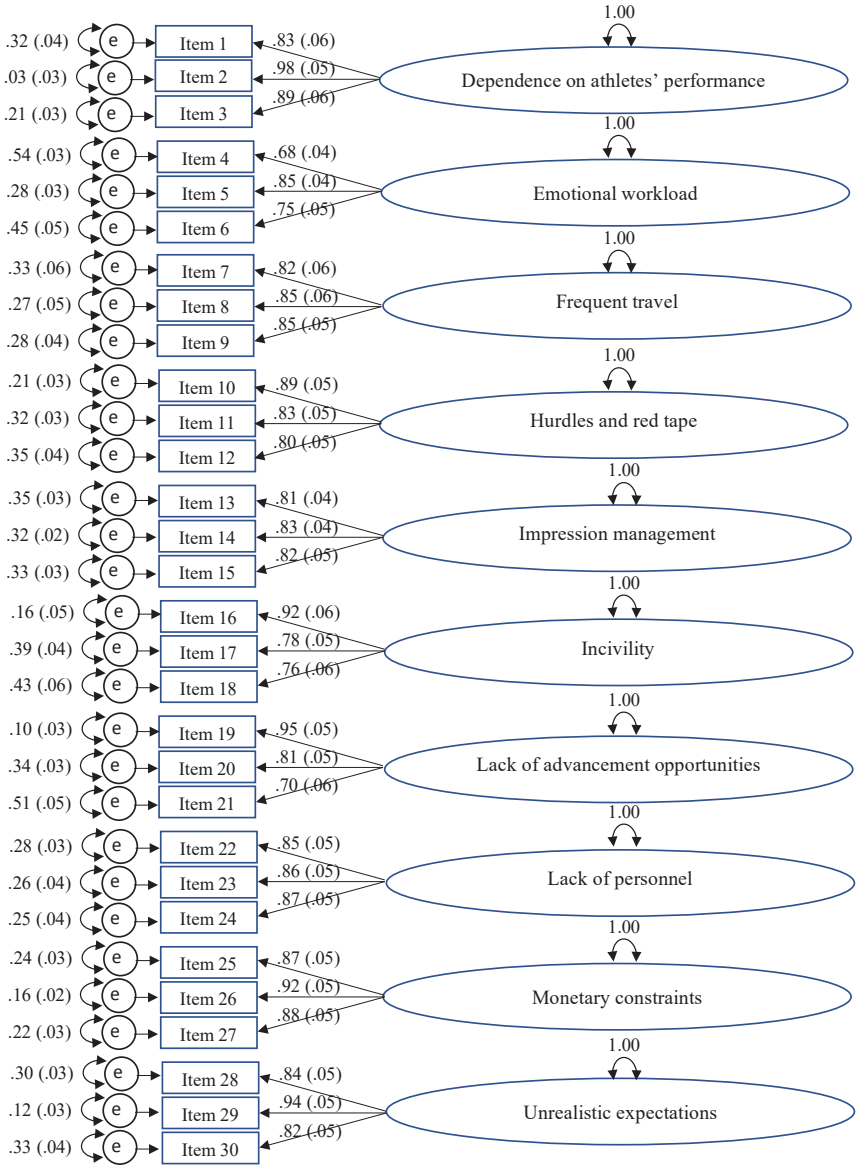

Figure 1. CFA of job demands with standardized parameter estimates (and corresponding standard errors). Latent variables were allowed to correlate. CFI = .96. TLI = .96. RMSEA = .04. SRMR = .05.

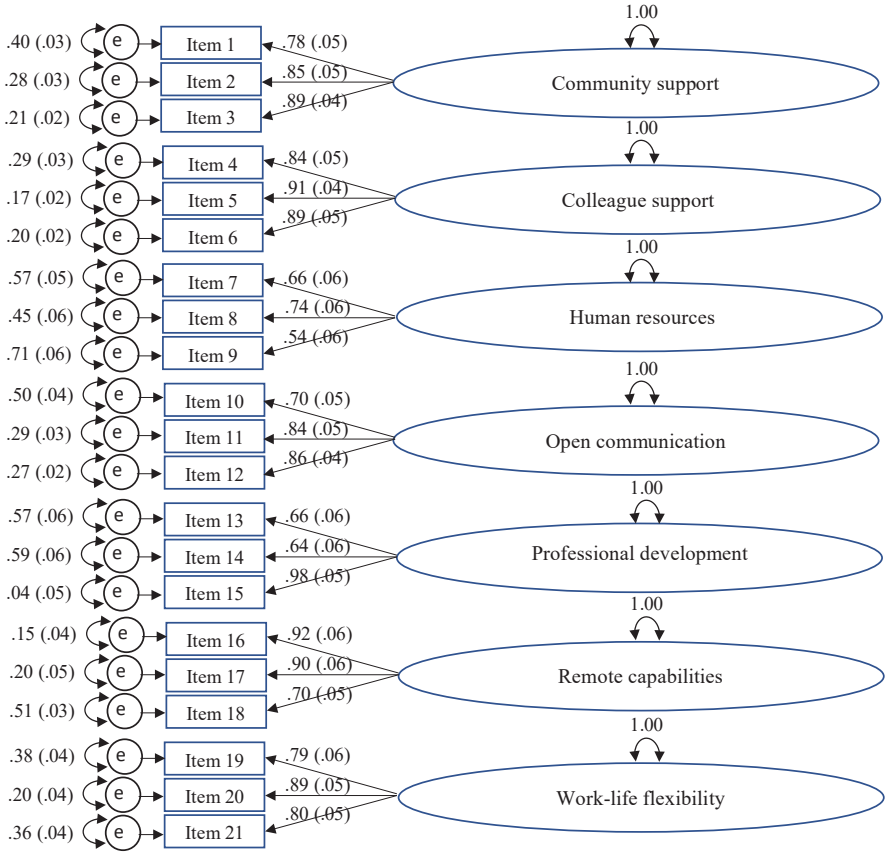

Figure 2. CFA of job resources with standardized parameter estimates (and corresponding standard errors). Latent variables were allowed to correlate. CFI = .96. TLI = .95. RMSEA = .05. SRMR = .05.

worked 20-29 hours per week (n = 1), three percent worked 30-39 hours per week (n = 2), 17% worked 40-49 hours per week (n = 12), 33% worked 50-59 hours per week (n = 23), 26% worked 60-69 hours per week (n = 18), nine percent worked 70-79 hours per week (n = 6), four percent worked 80+ hours per week (n = 3), and six percent did not report (n = 4).

Participants held a variety of job titles, such as Academic Advisor, Athletics Business Manager, Digital Content Manager, Director of Equipment, Head Coach, and Ticket Operations Manager. Because we wanted to examine the experiences of collegiate sports employees broadly, we strived to recruit a sample of employees with various positions in the industry. Considering the distinctive nature of the collegiate sports industry (as described in the Introduction), we anticipated that employees

across different roles would encounter shared demands and resources specific to the industry.

Measures. In this stage two measures, job demands and job resources, were defined and then openly collected. Participants were told that "Job demands are challenging physical, social, or organizational aspects of the job." They were then asked to "Please list at least 5 JOB DEMANDS or CHALLENGES you experience in your position within collegiate athletics." Participants were told that "Job resources are aspects of your position in collegiate athletics that help you achieve work-related goals." Then they were asked, "What RESOURCES help you achieve your work-related goals in collegiate athletics?"

Analysis. Two researchers with doctorates and qualitative research experience, one of whom has worked in collegiate athletics for many years, engaged in a six-step thematic analysis approach outlined by Braun and Clarke (2006): 1) familiarize yourself with the data, 2) generate initial codes, 3) search for themes, 4) review themes, 5) define and name themes, and 6) produce the report. In the first step, two researchers independently immersed themselves in the data by thoroughly reading each response multiple times to gain a comprehensive understanding of the content and identify preliminary patterns. Next, the researchers independently generated initial codes by identifying meaningful segments of data that corresponded to workplace demands (e.g., excessively complex policies) and resources (e.g., parental leave) experienced by collegiate sport employees. These codes served as the foundational elements for theme development. The coding process was inductive, allowing patterns to emerge naturally from the data rather than being imposed by preexisting frameworks. Following the initial coding process, the researchers independently searched for themes by clustering related codes into broader conceptual categories. For instance, codes related to bureaucratic challenges, inflexible institutional policies, and administrative burdens were grouped under a potential theme such as "hurdles and red tape," while codes related to employee benefits and supports were categorized under "human resources."

The two researchers then collaboratively reviewed and refined the emerging themes by comparing their independently derived categorizations. They found considerable alignment in their themes, likely due to the straightforward and structured nature of the responses provided by subject matter experts (SMEs). For example, when respondents described job resources, they frequently mentioned straightforward, concrete examples such as "funding for professional development to attend conferences," "AD support for family leave," and "community support." Unlike interview studies or critical incident analysis, which often require extensive interpretative judgment, the relatively direct nature of the responses minimized ambiguity in theme identification. In cases where discrepancies arose in coding or theme classification, the researchers engaged in collaborative discussions to resolve differences and refine the categorization scheme. Finally, in the fifth step, they refined and finalized the theme names, which are presented in the findings below.

Stage 1 Results: Determining Scale Content

Ten job demands emerged from collegiate sport employees' responses: dependence on athletes' performance, emotional workload, frequent travel, hurdles and red tape, impression management, incivility, lack of advancement opportunities, lack of personnel, monetary constraints, and unrealistic expectations. Table 1 displays the job demands with example responses from employees.

To help collegiate sport employees cope with their unique job demands, eight job resources emerged: community support, colleague support, financial resources, human resources, open communication, professional development, remote capabilities, and work-life flexibility. Table 2 displays the job resources with example responses from collegiate sport employees.

Stage 2 Method: Item Development and Refinement

Stage 1 involved identifying job demands and resources faced by collegiate sport employees. The goal of Stage 2 was to draft an initial pool of scale items based on findings from Stage 1 and narrow those to the top performing items.

Drafting Initial Scale Items. Three researchers were involved in the initial item writing stage. They evenly split the job demands and resources identified in Stage 1, and each researcher independently drafted six to eight items to measure each construct (136 items total). Employees' responses from Stage 1 were used to help generate items, so that the items reflected actual sport employees' experiences. For example, an item written to measure dependence on student-athletes' performance is "My job is dependent on amateurs' performance." The researchers agreed on using a 4-point agreement scale for response ("totally disagree" to "totally agree"), which aligns with the scale points used in existing JDR model research (Demerouti et al., 2001).

After independently drafting items, the three researchers collaboratively reviewed and refined the drafted items to ensure they measured the intended constructs and met characteristics of good survey items (e.g., no double-barreled items, purposeful and straightforward, appropriate for the scale points; Miller & Lovler, 2018; Spector, 1992). The items were then reviewed by two subject matter experts (SMEs) who engaged in a sorting task to help determine if the items measured their intended constructs; the SMEs independently matched each survey item to the construct (i.e., job demand or job resource) they believed it measured. Inter-rater agreement was 83%. For items lacking initial agreement, three researchers reviewed the items and modified them or replaced them so that each item more clearly measured its intended construct.

Administering Initial Scale Items. After drafting and refining an initial pool of items, the next step was to administer the items to sports employees with the goal of reducing the scales to the top performing items based on item reliability analyses and factor analyses. To avoid overburdening participants and encountering issues associated with survey fatigue, the items were split between two surveys: a job demands survey (76 potential items) and a job resources survey (60 potential items). The surveys were administered to two different samples of participants; different

Table 1.
Job stressors in sports management

Job Stressor	Example Participant Responses	Example Existing Literature
Dependence on athletes' performance	"dependency on part-time athletes to influence the nature of my full-time employment" "dependency on amateur athletic performance" "dependency on team performance"	Morrow & Howieson (2018)
Emotional workload	"always being 'on call'" "the idea [that] there is always more that can be done."	Burton & Leberman (2017) Mazerolle et al. (2008) Taylor & Wells (2017) Taylor et al. (2021)
Frequent travel	"making up for time lost while traveling for work" "frequent travel [...] I travel with all the teams I work with [... which] leaves very little time for anything else" "travel weekly for work while still needing to keep up on responsibilities in the office"	Burton & Leberman (2017) Dixon & Bruening (2005) Mazerolle et al. (2008) Taylor & Wells (2017) Taylor et al. (2021)
Hurdles and red tape	"university bureaucracy" "dealing with the red tape that the university has set up that makes it difficult to get things done quickly" "limited ability to accomplish anything because of institutional operations and state procurement process[es]"	
Impression management	"the never-ending struggle for keeping up with the Jones[es]"	Rubin (2017)

Incivility	"underappreciated" "little respect" "gender discrimination"	Rubin (2017) Taylor & Wells (2017)
Lack of advancement opportunities	"lack of internal career advancement" "lack of upward mobility" "no room for advancement"	Taylor & Wells (2017)
Lack of personnel	"poor staff to student-athlete ratio" "not enough essential staff members"	Mazerolle et al. (2008)
Monetary constraints	"salary is not consistent with the amount of time commitment" "budget, budget, and budget"	Rubin (2017)
Unrealistic expectations	"unrealistic expectations from student athletes and fans" "dealing with coaches and their unrealistic expectations" "entitled student-athletes with expectations of being given everything"	Rubin (2017)

Table 2.
Job resources in sports management

Job Resource	Example Participant Responses	Example Existing Literature
Community support	"community support" "support from third parties to augment the experience of people here"	Dixon & Bruening (2005) Taylor & Wells (2017)
Colleague support	"helpful coworkers" "supportive and enjoyable coworkers" "support from supervisors and other coworkers"	Dixon & Bruening (2005) Taylor & Wells (2017)
Financial resources	"funding for recruiting" "supporting wages that retain talented staff" "financial support"	More commonly mentioned as a demand (e.g., Rubin, 2017)
Human resources	"plenty of sick hours and vacation hours when needed" "assistance with hiring" "good benefits"	
Open communication	"the lines of communication are always open" "NCAA communication"	
Professional development	"funding for professional development to attend conferences" "mentorship" "For me, [professional development] is one of my biggest motivators."	Morrow & Howieson (2018)
Remote capabilities	"travel computer to work from home" "flexibility of the job to [...] work from home."	
Work-life flexibility	"flexibility to handle family and personal issues" "[culture that] promotes a healthy work/life balance" "flexibility of the job to be a parent [... and] travel with family (if need be)."	Burton & Leberman (2017) Dixon & Bruening (2005) Schenewark & Dixon (2012) Taylor & Wells (2017)

samples were appropriate because the job demands and job resources scales were conceptualized and analyzed as separate scales.

Participants and Measures

Stage 2 Sample 1. Sports employees who were also graduate students in a sport management program in the southeastern United States were recruited via email and word-of-mouth to take an online survey between September 2020 and March 2021. The survey consisted of the initial pool of job demand items created for this research as described above. Example items include, "My job is dependent on amateurs' performance," "Athletic department stakeholders have unrealistic expectations of me," and "Centralized institutional policies make it difficult to get things done efficiently." Participants responded to the items on a 4-point agreement scale ("totally disagree" to "totally agree").

One-hundred and thirty-eight sport employees began the survey, and the final sample consisted of 101 participants who completed the majority of the survey. Fifty-one of the participants identified as male (51%), 41 identified as female (41%), and nine did not report their sex (8%). Participants ranged in age from 20 to 41 (M = 23.87, SD = 3.28). Sixty-one participants were White, 18 were Black or African American, five were Hispanic, four were multiple races, one was Asian, and 12 did not report their race. Participants held a variety of positions, such as Game Day Operations Assistant, Social Media Manager, Marketing Assistant, and Student-Athlete Enhancement Assistant.

Stage 2 Sample 2. Mirroring the recruitment strategy for Sample 1, sport employees who were also graduate students in a sport management program in the northeastern United States were recruited via email and word-of-mouth between September and October 2020 to take an online survey. The survey consisted of the initial pool of job resource items created for this research as described above. Example items include, "I am able to maintain open lines of communication with my direct supervisor," "Adequate support is provided for wellness programming through human resources," and "My athletic department practices good work-life flexibility." Participants responded to the items on a 4-point agreement scale ("totally disagree" to "totally agree").

One-hundred and sixty-nine sport employees began the survey, and the final sample consisted of 112 participants who completed the majority of the survey. Fifty-six of the participants identified as male (50%), 48 identified as female (43%), and eight did not report their sex (7%). Participants ranged in age from 21 to 50 (M = 25.45, SD = 5.27). Seventy-seven participants were White, 15 were Black or African American, five were Hispanic, five were multiple races, one was Asian, and nine did not report their race. Participants held a variety of positions, such as Ticket Sales Associate, Athletics Trainer, Athletics Communication Assistant, and Fan Experience Intern.

Stage 2 Results: Item Development and Refinement

To examine the dimensionality of the job demands items, an exploratory factor analysis was conducted using principal components in SPSS 27. Fifteen eigenvalues

were greater than 1.0, and the scree plot showed points of inflection at seven and ten factors. Seven, 10, and 15 factors were extracted using principal axis factoring and a promax rotation of the factors. Ten factors had the best fit and were the most easily interpretable. The ten factors aligned with the job demands identified in Stage 1, and the pattern matrix showed that all ten factors had multiple items with factor loadings over .60.

To narrow the scale to the top performing items, items with cross-loadings over .30 were removed, followed by items with the lowest loadings on their primary factor. The result was a clean solution in which all remaining items loaded at least .58 on their primary factor, and no items had cross-loadings above .30. However, two factors, impression management and hurdles/red tape, only had two items each. Three researchers met to collaboratively write one additional item for both factors that aligned with the other items as well as employees' experiences from Stage 1. The other eight factors had three items each. The top 28 performing items and two new items demonstrated promise for a 30-item scale measuring 10 job demands experienced in the sport industry.

Mirroring the analysis strategy for job demands an exploratory factor analysis was conducted in SPSS 27 to examine the dimensionality of the job resource items. Fifteen eigenvalues were greater than 1.0, and the scree plot showed points of inflection at four and seven factors. Four, seven, and 15 factors were extracted using principal axis factoring and a promax rotation of the factors. Because the initial items were written to capture eight resources, we also extracted eight factors. None of the extracted solutions had a clean factor structure, so we reduced the items based on item reliability analyses and then re-examined the factor structure. We examined the item-total correlations and Cronbach's alpha with the item removed for all items written to measure the same construct (i.e., job resource). Items were removed to maximize the internal consistency reliability and breadth of content for each construct until four items remained for each job resource.

A principal components exploratory factor analysis was then performed on the remaining 32 items. Eight eigenvalues were greater than 1.0, so an 8-factor solution was extracted using principal axis factoring and a promax rotation method. The pattern matrix showed that all eight factors had multiple items with loadings over .55, and only two items had cross-loadings above .30. To further narrow the scale to the top performing items, items with the highest cross-loadings and lowest loadings on their primary factor were removed until three items remained to measure each of the eight factors. Every remaining item loaded at least .52 on its intended factor, and only one item had a cross-loading above .30. The top 24 performing items demonstrated promise for a scale measuring eight job resources experienced in the sport industry.

Stage 3 Method: Confirmatory Analyses and Initial Validity Evidence

After narrowing the initial item pool to the top performing items, the next step was to administer the refined scale to sport employees to confirm the factor structure in a new sample and examine initial evidence of validity. Separate surveys were prepared to examine the job demands and resources scales, and they were administered to two samples of collegiate sport employees.

Participants in Stage 3

Stage 3 Sample 1. Emails were sent to 1,554 sport employees who work at universities in one of the NCAA Football Bowl Subdivision (FBS) Group of Five Conferences (e.g., American Athletic Conference, Conference USA, Mid-American Conference, Mountain West Conference, and Sun Belt Conference) between April and June 2021. The research team and research assistants obtained their emails from publicly available lists on university webpages. Emails were sent in batches of 500 until the research team obtained data from over 200 participants Two hundred and ninety-nine employees began the survey, and the final sample consisted of 249 participants who completed the survey. One-hundred and forty-six participants identified as male (59%), 98 identified as female (39%), and five did not report their sex (2%). Participants ranged in age from 23 to 76 (M = 37.85, SD = 11.04). One-hundred and eighty-seven participants were White, 31 were Black or African American, 10 were multiple races, seven were Hispanic, three were Asian, one was American Indian or Alaska Native, and ten did not report their race. Participants held a variety of positions, such as Director of Football Operations, Head Coach of Women's Soccer, Assistant Director for Athletic Performance, and Director of Sports Medicine.

Stage 3 Sample 2. Emails were sent to 5,265 sport employees who work at universities in three of the NCAA FBS Group of Five Conferences between June 2021 and April 2022. Similar to Sample 1, the research team and research assistants obtained their emails from publicly available lists on university webpages. Emails were sent in batches of 500 until the research team obtained data from over 200 participants Three-hundred and seventy-two employees began the survey, and the final sample consisted of 234 participants who completed the survey. One-hundred and seventeen of the participants identified as male (50%), 103 identified as female (44%), and 14 did not report their sex (6%). Participants ranged in age from 22 to 80 (M = 37.39, SD = 11.64). One-hundred and eighty-five participants were White, 22 were Black or African American, five were multiple races, four were Hispanic, two were Asian, and 16 did not report their race. Participants held a variety of positions, such as Director of Athletics and Recreation, Equipment Manager, Athletics Event Coordinator, and Chief of Staff/Senior Women Administrator.

Measures

All measures were administered to both samples, with the exceptions that job demands were only administered to Sample 1 and job resources were only administered to Sample 2.

Job Demands. Job demands were measured with the scale developed in this research. The scale consists of 30 items measuring 10 subscales: dependence on athletes' performance, emotional workload, frequent travel, hurdles and red tape, impression management, incivility, lack of advancement opportunities, lack of personnel, monetary constraints, and unrealistic expectations. The job demands scale items are depicted in Appendix A. Each subscale demonstrated sufficient internal consistency reliability (α = .79 - .93).

Job Resources. Twenty-four items measuring eight job resources were administered to participants. The final scale consists of 21 items measuring seven subscales: community support, colleague support, human resources, open communication, professional development, remote capabilities, and work-life flexibility. The job resources scale items are depicted in Appendix B. Cronbach's alpha of the seven subscales ranged from .68 to .91.

Burnout. Burnout was measured with the seven-item work-related burnout subscale of the Copenhagen Burnout Inventory (CBI; Kristensen et al., 2005). An example item is "Do you feel burnt out because of your work?" Participants responded on a five-point scale (1 = never, 5 = always). The scale demonstrated adequate internal consistency reliability (Sample 1 and Sample 2 α = 90).

Engagement. Participants completed the 9-item Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2002). An example item is, "I am enthusiastic about my job." Employees responded on a 7-point scale (1 = never; 7 = always; every day). Cronbach's alpha was .91 in Sample 1 and .92 in Sample 2.

Stage 3 Results: Confirmatory Analyses and Validity Evidence

Job Demands Measurement Model Confirmation

A confirmatory factor analysis was conducted using the 'lavaan' package in R (Rosseel, 2012) to examine the fit of the 10-factor measurement model that emerged during Stage 2. The 10 factors were allowed to correlate, the factor variances were set to one, and maximum likelihood estimation was used. Although the chi-square test was significant, $\chi^2(360) = 535.70$, p = < .01, the other goodness of fit indices suggested a strong model fit. The Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) were higher than .95 as recommended by Hu and Bentler (1998; CFI = .963, TLI = .956). The root mean square error of approximation (RMSEA) and the standardized root mean residual (SRMR) were lower than the .06 and .08 cutoffs recommended by Hu and Bentler (1998; RMSEA = .044, SRMR = .049). All of the items had standardized loadings above 0.67 on their corresponding factors (.678 – .983). The model with standardized parameter estimates and corresponding standard errors is shown in Figure 1. Item reliability analyses were conducted next, which demonstrated that each subscale had adequate internal consistency reliability (α = .79 - .93).

Providing initial evidence of criterion-related validity, nine of the 10 job demands were positively correlated with burnout, *r*s = .21 - .59, *p*s < .01. Only dependence on athletes' performance was unrelated to burnout $r = .06$, $p > .05$. Five of the job demands were negatively associated with work engagement, *r*s = -.39 - -.16, *p*s < .05, four were unrelated to work engagement, *r*s = -.08 - -.03, *p*s > .05, and dependence on athletes' performance was positively associated with work engagement, $r = .19$, $p < .01$. Correlations and descriptive statistics of job demands are provided in Table 3.

To investigate the relative importance of each job demand to burnout, a relative weights analysis was conducted using a program prepared by Tonidandel and LeBreton (2015). Together, the job demands accounted for 46% of variance in employees' burnout (R^2= .457). In order of most to least variance in burnout explained,

Table 3.
Job demands descriptive statistics and correlations

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Dependence on athletes	2.42	1.01	(.93)												
2. Emotional workload	3.30	.66	.24**	(.79)											
3. Frequent travel	2.05	.97	.36**	.31**	(.87)										
4. Hurdles and red tape	2.65	.80	.07	.25**	.19**	(.87)									
5. Impression management	3.42	.67	-.01	.32**	.13*	.27**	(.86)								
6. Incivility	1.72	.94	.00	.26**	.14*	.33**	.35**	(.85)							
7. Lack of advancement	3.11	.80	.04	.21**	.21**	.25**	.18**	.31**	(.85)						
8. Lack of personnel	3.19	.89	-.01	.22**	.17**	.24**	.18**	.27**	.31**	(.89)					
9. Monetary constraints	2.49	.90	.13*	.22**	.29**	.42**	.16*	.20**	.25**	.44**	(.92)				
10. Unrealistic expectations	2.05	.91	.09	.37**	.31**	.33**	.37**	.59**	.41**	.40**	.41**	(.89)			
11. Burnout	3.19	.87	.04	.52**	.35**	.24**	.21**	.41**	.48**	.37**	.28**	.59**	(.90)		
12. Engagement	5.27	1.11	.19**	-.16*	-.03	-.06	-.08	-.19**	-.39**	-.16*	-.04	-.32**	-.55**	(.91)	
13. Job satisfaction	4.57	1.29	.09	-.32**	-.13*	-.14*	-.17**	-.35**	-.49**	-.20**	-.16*	-.51**	-.63**	.73**	(.89)

the job demands were emotional workload (28.22% of the explained variance), unrealistic expectations (23.29% of the explained variance), lack of advancement (18.68% of the explained variance), frequent travel (9.51% of the explained variance), incivility (9.13% of the explained variance), lack of personnel (5.18% of the explained variance), hurdles and red tape (1.81% of the explained variance), impression management (1.68% of the explained variance), monetary constraints (1.44% of the explained variance), and dependence on athletes' performance (1.05% of the explained variance). Confidence interval tests of significance suggest that the partial effects of emotional workload, unrealistic expectations, lack of advancement, frequent travel, and incivility were significant; the partial effects of lack of personnel, hurdles and red tape, impression management, monetary constraints, and dependence on athletes' performance were not significant.

Job Resources Measurement Model Confirmation

A confirmatory factor analysis was conducted using the 'lavaan' package in R (Rosseel, 2012) to examine the fit of the 8-factor measurement model that emerged during Stage 2. The eight factors were allowed to correlate, the factor variances were set to one, and maximum likelihood estimation was used. Although the chi-square test was significant, $\chi^2(224) = 363.66$, p = < .01, the other goodness of fit indices generally suggested a strong model fit. The CFI was higher than .95 as recommended by Hu & Bentler (1998; CFI = .951), although the TLI was slightly below .95 (TLI = .940). The RMSEA and the SRMR were lower than the .06 and .08 cutoffs recommended by Hu and Bentler (1998; RMSEA = .052, SRMR = .056). All of the items had standardized loadings above 0.55 on their corresponding factors (.558 – 6.718). The model with standardized parameter estimates and corresponding standard errors is shown in Figure 2.

Item reliability analyses were conducted next, which demonstrated that each subscale had internal consistency reliability above .70 (α = .79 - .91), with the exceptions of human resources (α = .68) and financial resources (α = .36). Because Cronbach's alpha of the financial resource subscale was low and financial constraints were measured as a job demand, we decided to remove financial resources from the job resources model. After removing financial resources, we conducted a confirmatory factor analysis to examine the fit of the 7-factor measurement model. Although the chi-square test was significant, $\chi^2(168) = 279.91$, p = < .01, the other goodness of fit indices suggested a strong model fit. The CFI and the TLI were at least .95 as recommended by Hu & Bentler (1998; CFI = .960, TLI = .950). The RMSEA and the SRMR were lower than the .06 and .08 cutoffs recommended by Hu and Bentler (1998; RMSEA = .054, SRMR = .054). All the items had standardized loadings above 0.55 on their corresponding factors (.558 – 1.410).

Providing initial evidence of criterion-related validity, all seven job resources were positively correlated with work engagement, *r*s = .27 - .42, *p*s < .01, negatively associated with burnout *r*s = -.55- -.26, *p*s < .05. Correlations and descriptive statistics of job resources are displayed in Table 4.

Table 4.
Job resources descriptive statistics and correlations

	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. Community support	2.66	.71	(.88)									
2. Colleague support	3.15	.81	.32**	(.91)								
3. Human resources	2.88	.69	.40**	.42**	(.68)							
4. Open communication	3.31	.70	.32**	.72**	.40**	(.83)						
5. Professional development	2.40	.84	.44*	.41**	.44**	.41**	(.79)					
6. Remote capabilities	1.90	.90	.10	.09	.24**	.07	.16*	(.87)				
7. Work-life flexibility	2.72	.84	.31**	.39**	.50**	.41**	.41**	.42**	(.87)			
8. Burnout	2.86	.75	-.34**	-.37**	-.44**	-.31**	-.36**	-.26**	-.55**	(.90)		
9. Engagement	5.38	1.01	.33**	.33**	.27**	.33**	.30**	.33**	.42**	-.58**	(.91)	
10. Job satisfaction	4.54	1.26	.43**	.56**	.41**	.54**	.53**	.21**	.58**	-.62**	.56**	(.88)

To investigate the relative importance of each job resource to work engagement, a relative weights analysis was conducted using a program prepared by Tonidandel and LeBreton (2015). Together, the job resources accounted for 26% of variance in employees' engagement (R^2= .2624). In order of most to least variance in engagement explained, the job resources were work-life flexibility (32.54% of the explained variance), remote capabilities (19.77% of the explained variance), community support (17.15% of the explained variance), open communication (11.34% of the explained variance), colleague support (9.63% of the explained variance), professional development (6.55% of the explained variance), and human resources (3.02% of the explained variance). Confidence interval tests of significance suggest that only the partial effect of work-life flexibility was significant; the partial effects of remote capabilities, community support, open communication, colleague support, professional development, and human resources were not significant.

Discussion

The findings contribute to extending the job demands and job resources literature and specifically better understanding the workplace experience of sport employees. First, our results extended JDR to sport management by validating the JDRS model. Revealing 10 job demand subscales specific to sport employees: dependence on athletes' performance, emotional workload, frequent travel, hurdles and red tape, impression management, incivility, lack of advancement opportunities, lack of personnel, monetary constraints, and unrealistic expectations. Unlike other industries, the commercialization of collegiate sport, particularly with the year-round schedule serving multiple teams, has helped create unrealistic expectations from fans, alumni, donors, administration, students, lawmakers, and beyond. Each stakeholder group sets expectations that may become difficult to meet because they are dependent upon the actions of others, particularly young adult's performance. To meet the growing demand of sport, resources must continue to grow too. Our results revealed seven resource subscales that are critical to sport employees: community support, colleague support, human resources, open communication, professional development, remote capabilities, and work-life flexibility. Being a live entertainment industry, work occurs around the clock, so having the flexibility to come into work late after having worked a game that went into double overtime the night before may be considered a valuable resource. Also, a unique resource for sport was the importance of community support. With some institutions welcoming over 100,000 fans into football stadiums weekly, the outpouring communal partnership with local sponsorships and all-day tailgating symbolizes value and status. Second, our results align with some historical key outcomes of job demands and resources: (1) job demands predict burnout, (2) job resources predict work engagement, and (3) job resources impact burnout. Nine of the 10 job demands we examined related to burnout, and all of the seven job resources we examined related to both work engagement and burnout.

Notably, this research identified and quantified more job demands than job resources in the sport industry. A possible explanation is that negative experiences tend to be more salient and impactful than positive experiences (Baumeister et al., 2001), which may have influenced participants' reports of job demands and resources in Stage 1. Previous research that asked participants to recall a recent, important event similarly found that individuals reported more bad events than good ones (Finkenauer & Rime, 1998). In addition to being larger in quantity, the job demands in this research were more industry-specific than the job resources. This finding may reflect improved recall of negative events (Baumeister et al., 2001); it could also reflect an opportunity to provide sport employees with resources that are better tailored to their unique demands especially as most participants noted working 50 or more hours a week. These resources also do not have to come at a cost for organizations. For example, practitioners could provide more flexible work hours to accommodate the late night or weekend events.

Previous work examining sport industry employees illustrated a lack in available resources, however, much of this research was conducted utilizing qualitative methods with small samples of former professional athletes (Richardson & McKenna, 2020) and women head coaches (Bruening & Dixon, 2007; Dixon & Bruening, 2007). Richardson and McKenna (2020) revealed that due to the demanding nature of the sport industry, particularly the physical and social demands, there was a limited career sustainability. While they focused on the physical demands professional athletes experience our research revealed the social demands of sport employees are alive and well too. For example, in the occupation of coaching, women head coaches were experiencing high levels of work-family conflict because of insufficient resources (Bruening & Dixon, 2007; Dixon & Bruening, 2007). Additionally, findings suggested the experiences of these women head coaches were heavily influenced by work climate and culture (e.g., presenteeism, work hours/travel, women's home responsibilities), indicating structural and social forces not individual choices were most impactful (Dixon & Bruening, 2007). While Dixon and Bruening's (2007) research provided important insights into the experiences of mothers who hold head coaching positions within the college sport industry and several of the themes were utilized to generate items for the current study, the qualitative nature did not allow for generalizability. Additionally, work from Dixon and Sagas (2007) found that perceived organizational supports positively related to the job and life satisfaction of coaches, illustrating how available organizational supports can not only impact an employee's job satisfaction, but also satisfy some socioeconomical needs. These findings are important, as they help explain the importance of providing adequate resources, but again, this sample only included head coaches with families. As such, it was important for our research to expand the scope of inquiry to include all employees mainly on the business side of sport (i.e., administrators, staff, and coaches).

While recent work has started to expand in scope, garnering larger, more diverse samples of college sport employees (e.g., Huml et al., 2021; Taylor et al., 2019; Weight et al., 2021), this research has made important contributions relating to the

work experiences of college sport employees, specifically as it relates to the topics of work engagement, burnout, and work addiction. However, to date those examples have yet to examine the available job resources and job demands in the industry in a quantitative nature. Participants in Weight et al. (2021) described a lack of flexibility, culture of presenteeism, and high levels of required sacrifice necessary to succeed in the industry paired with a lack of "support" utilizing qualitative narratives, but specific resources and demands were not discussed. As such, this is one of the first models dedicated to the specific job resources and job demands of collegiate sport, which is a necessary step in better understanding the work experiences of all sport employees.

In addition to the theoretical contributions, several practical implications stem from the research. Perhaps, foremost, is the importance of sport employees, better yet sport organizations, identifying the specific demands of the work and resources provided to accomplish the work. Explicit measures of job demands and resources were created by sport practitioners and validated by researchers, so both can use either the whole measure to capture job demands and resources broadly, or specific subscales can be used to focus on particular demands or resources. Indeed, working in sport is demanding. Similar to other industries there is no shortage of long hours, heavy travel schedules, and extreme pressure to perform (Morrow & Howieson, 2018; Taylor & Wells, 2017); however, dissimilar to other industries performance is predicated on amateurs' performance and career mobility generally requires relocation, so resources should be identified and allocated to offset the additional pressure to win-at-all-cost. In particular, out of the 10 job demands we examined, emotional workload, unrealistic expectations, lack of advancement, frequent travel, and incivility accounted for the most variance in employees' burnout. These five demands may be especially important for stakeholders to pay attention to. Stakeholders, both internal and external constituents, need to be educated on the operational ecosystem, resource accessibility, resource allocation, and impression management to better manage expectations, individually and collectively. Finally, even prior to the pandemic, employees often found it difficult to maintain boundaries between work and nonwork (Ramarajan & Reid, 2013), and now with the work-life integration and constant connection demanding more than ever, particularly for sport employees (Weaver, 2022), we must acknowledge that of the seven resources measured, work-life flexibility accounted for the most variance in employees' engagement. Knowing sport employees were some of the first to return to work to provide live entertainment, sport organizations and stakeholders once again may be demanding those working in sport to prioritize work over everything (Burton & Lieberman, 2017; Taylor et al., 2021).

Limitations and Future Research

All research has limitations, and these limitations lead to future research opportunities. Being the initial measure and validation of a JDRS model, we focused on conferences in the NCAA FBS group of five because of the sweet spot of resources and demands; however, with the unique amateurism status of collegiate athletics,

the middle-tiered operating budgets, multi-media rights deals, and the demanding stakeholder groups (e.g., donors, alumni, faculty, coaches, student-athletes), future researchers may want to evaluate other sport organizations particularly serving different sectors of the industry (e.g., youth, professional, community). Second, although the demands of collegiate sport employees are unique and specific to the industry, the resources seem more general, leaving room for future researchers to unpack the engagement outcome of sport employees. For example, future researchers could evaluate ways to decrease sport employee burnout and increase sport employee engagement by addressing the demands of the sport industry with resources. Recognizing burnout leads to negative outcomes, whereas job resources foster positive organizational outcomes and individual well-being (Bakker & Demerouti, 2017). Third, the identity of the majority of participants were White and male, and while this is representative of the population working in sport (see Lapchick, 2021), it does not address the intersectionality of identities that may affect one's workplace experience. As such, future researchers should explore how global majority individuals experience job demands and job resources in an occupation where they have been the minority.

Participants in stage 2 of the scale development process were graduate students in a sports management program who were employed part-time in the field. Some researchers have expressed concern that findings utilizing convenience samples of students may not generalize to other samples of employees; however, any sample of workers for which the research is intended to generalize is appropriate (Highhouse & Gillespie, 2009; Landers & Behrend, 2015). While one may be concerned that employed students' experiences may not generalize to other employees, those concerns were alleviated by the replication involving a different sample of NCAA employees. By utilizing multiple different samples of sports employees in this research that yielded similar results, researchers have greater confidence in the generalizability of the findings. Future research would be beneficial to continue examining the new scale with different samples. Specifically, we are hopeful that this scale will be useful for employees throughout the sport industry, including facets such as college sport, professional sports, and the Olympics. However, the majority of samples in this research were collegiate sport employees. More research is needed to determine if the demands and resources also apply to other segments of the sport industry.

Finally, scale development is an ongoing process, and the field would benefit from continued research that examines the reliability and validity of the new measures. For example, future research could investigate test-retest reliability of the new measures by measuring job demands and job resources over time. Future research could also examine convergent and discriminant validity by administering the new measures along with other measures of similar and dissimilar constructs. This research provides initial evidence of the scale's strong psychometric properties. In addition to further investigations of the scale's reliability and validity, future research could also test a wording change to one of the items. In hindsight, the research team acknowledges that the term "amateurs" in one of the job demand subscales is a

poor term for student athletes. The NCAA is moving away from the term, which the authors wholeheartedly support. While the authors cannot change the wording of items that were already administered to participants, future research would be beneficial to examine that subscale with the term "student athletes" or "college athletes" instead. The authors have no reason to suspect that such a wording change would harm the psychometric properties of the scale, and future research would be beneficial to investigate that possibility. Future research can continue to enhance the measures while adding to the understanding of how specific job demands and resources operate in the collegiate sports industry.

Conclusion

Our study, through scale development, was the first dedicated to measuring job demands and job resources experienced by sport employees. While prior research, mainly qualitative in nature, has revealed the high demands of the sport landscape (Bruening & Dixon, 2007; Dixon et al., 2008; Dixon & Bruening, 2005; Hall et al., 2010), our results extend psychology literature (Demerouti et al., 2001) and develop a model specific to the unique industry of sport - the Job Demands Resources Sport (JDRS) model.

Appendix A

Job Demand Measure	Job Demand Items
Dependence on Athletes' Performance 1	My success depends on student-athletes' performance.
Dependence on Athletes' Performance 2	My job relies on the performance of our players.
Dependence on Athletes' Performance 3	My job is dependent on amateurs' performance.
Emotional Workload 1	I am constantly connected to my phone for work.
Emotional Workload 2	I am tied to my work at all times.
Emotional Workload 3	I cannot disconnect from work.
Frequent Travel 1	I have to balance frequent travel with other professional duties.
Frequent Travel 2	I have to make up for lost time spent traveling for work.
Frequent Travel 3	Work travel takes up a lot of my workday.
Hurdles and Red Tape 1	Centralized institutional policies make it difficult for my athletic department to be nimble.
Hurdles and Red Tape 2	Centralized institutional policies make it difficult for my athletic department to be successful.
Hurdles and Red Tape 3	Centralized institutional policies make it difficult to get things done efficiently.
Impression Management 1	Athletic department stakeholders compare our program to other programs.
Impression Management 2	Athletic department stakeholders compare our success to our competitors.
Impression Management 3	Athletic department stakeholders apply pressure to be on par with other programs.
Incivility 1	Athletic department stakeholders have insulted me.
Incivility 2	Athletic department stakeholders have threatened me or my position.
Incivility 3	Athletic department stakeholders have yelled at me.
Lack of Advancement Opportunities 1	Internal advancement opportunities are limited.
Lack of Advancement Opportunities 2	Promotions are limited within my department.
Lack of Advancement Opportunities 3	There are few opportunities for career advancement in my job.
Lack of Personnel 1	My department has less staff than we should.
Lack of Personnel 2	My job is difficult due to understaffing.
Lack of Personnel 3	The number of staff is inadequate in my department.
Monetary Constraints 1	Funding restrictions limit my ability to be effective at work.
Monetary Constraints 2	I cannot hit target objectives with the funding available to me.
Monetary Constraints 3	I do not have enough funding to do my job effectively.
Unrealistic Expectations 1	Athletic department stakeholders have unrealistic expectations of me.
Unrealistic Expectations 2	I am held to unrealistic standards at work.
Unrealistic Expectations 3	My superiors expect me to do the impossible.

Appendix B

Job Resources Measures	**Job Resources Items**
Community Support 1	I am satisfied with the amount of help I receive from our local community.
Community Support 2	My local community creates a sense of belonging.
Community Support 3	The local community supports me.
Human Resources 1	Adequate support is provided for family emergency leave through human resources.
Human Resources 2	Our human resource department offers support if a hostile work environment is present.
Human Resources 3	Our human resources department offers support in the hiring of staff.
Pro Development 1	My athletic department offers funding to pay for professional development opportunities outside of the institution for which I work.
Pro Development 2	My athletic department offers in-house professional development opportunities for employees.
Pro Development 3	My athletic department supports my professional development.
Colleague Support 1	I have opportunities to talk with my coworkers about things that really matter.
Colleague Support 2	I have quality relationships with my coworkers.
Colleague Support 3	My coworkers create a sense of community amongst our department.
Remote Capabilities 1	I am able to work from home, or another remote location, during the academic year.
Remote Capabilities 2	I am able to work from home, or another remote location, during the summer.
Remote Capabilities 3	I am encouraged to work remotely.
Open Communication 1	I am able to maintain open lines of communication with my direct supervisor.
Open Communication 2	I am able to maintain open lines of communication with those in my department.
Open Communication 3	I am able to maintain effective communication with my colleagues.
Work-life Flexibility 1	Employees within our athletic department are able to work a flexible schedule to accommodate non-work responsibilities.
Work-life Flexibility 2	My athletic department practices good work-life flexibility.
Work-life Flexibility 3	I am able to leave work to handle family responsibilities.

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JOURNAL OF INTERCOLLEGIATE SPORT

Student-Athletes' Road to Success in College Life: Factors Influencing Psychological Well-being, Athletic, and Academic Performance

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This study examined factors influencing college student-athletes' athletic and academic performance built upon self-determination theory and the theory of planned behavior. With intrinsic and extrinsic motivation for collegiate athletics, student-athletes can shape attitudes, subjective norms, and perceived control, fostering psychological well-being. Psychological well-being could influence performance in athletics and academic achievements. Voluntary student-athletes contacted by coaches participated in the survey. A total of 262 responses from NCAA Division I schools were collected. A mixed-methods approach, consisting of survey responses and interview data, was implemented. Results found psychological well-being played the most salient role in explaining student-athletes' athletic and academic performance self-assessments. With self-growth motivation (intrinsic), the "I can do" spirit was positively related to their psychological well-being, which triggered better athletic and academic performance. Inspirational role models (extrinsic motivation) also prompted psychological well-being. Intrinsic motivation independently affected student-athletes' self-assessed academic performance. The findings suggest self-reliant growth, supportive inspiration, and a success mindset explain student-athletes' disciplined fulfillment, competence, and compassion for current and future development in collegiate athletic and academic lives.

Keywords: student-athletes, psychological well-being, motivation, athletic performance, academic performance

Student-athletes' psychological well-being has been a long-standing interest in academia as they frequently experience risks and challenges in both physical and mental wellness. Student-athletes are vulnerable to body injuries (e.g., Dart, 2021; Podlog, 2020) and psychological distress (e.g., Bissett & Tamminen, 2022; Cosh et al., 2024), which demand therapeutic treatments for a sustainable athletic life. While

Journal of Intercollegiate Sport, 2025, 18.3

some student-athletes have a chance of turning into top-tier professional athletes for a fulfilling life, some others need to enter the non-athletic world for everyday life. Two key performance indicators (athletic and academic) are central to student-athletes' interests because both can determine their future (Levine et al., 2014; Malone et al., 2022).

For such reasons, much academic attention has been directed toward student-athletes' psychological well-being, examining both precedents and consequences. Psychological well-being can be defined as having a positive sense of meaning or purpose in life (Ryff & Keyes, 1995). Psychological well-being differs from clinical mental well-being, which focuses on managing mental disorders, illnesses, psychosocial disabilities, distress, and functional impairments (Grover et al., 2024). Psychological well-being pertains to how people perceive lives and evaluate life situations, offering a broader perspective than clinical mental well-being.

Some studies view student-athletes as an at-risk population due to their low level of empowerment (Moore, 2016), low psychological well-being (Beauchemin, 2014), enhanced psychological well-being through intervention (Podlog et al., 2020), and maintenance of dual identities between athletic and academic activities (van Rens et al., 2019). Such concerns are attributed to long absences from classes, limited leisure time, financial uncertainty, reduction of training due to education, and overload feelings (Condello et al., 2019). While student-athletes receive close attention and become public figures when their teams perform well, they also may need to strengthen their future potential in a non-athletic field.

Although research studies on student-athletes suggest psychological well-being should be a top priority for a successful athletic life, the explanatory components of positive psychological well-being among student-athletes remain in question. There are precedents of psychological well-being that drive up positive human relations with others, purpose in life, and environmental mastery. Incentivized motivation, attitudes, others' influence, and self-control posit as substantial influencers for psychological well-being (De Vos et al., 2021; Watson et al., 2021). A theory that considers motivational factors is self-determination theory. Self-determination theory (SDT) states self-regulative motivation prompts subsequent mobilization through willful mindsets and psychological interdependence with others to reach behavioral fulfillment (Deci et al., 1999). In turn, planned behavior components act as driving forces enriching psychological well-being. To supplement self-determination theory, the theory of planned behavior (TPB) recounts the relationships between motivation and processing components toward behaviors (Ajzen, 1991). As such, there is interdependence between SDT and TPB in explicating and strengthening the psychological well-being model, indicating student-athletes' psychological well-being can be articulated by adopting the two theories.

This study examines the relationships among college student athletes' motivation, attitude, subjective norms, perceived control, psychological well-being, and both athletic performance and academic performance using SDT and TPB. Specifically, it investigates how intrinsic and extrinsic motivation explain attitudes toward collegiate athletics, subjective norms, and perceived behavioral control. Intrinsic motivation

refers to doing an activity for inherent satisfaction (Good et al., 2022). Extrinsic motivation involves controlled and introjected regulations from external interactions for separable outcomes (Ryan & Deci, 2000). Attitudes are the dispositional evaluation of intended behavior. Subjective norms are the normative influence of important others. Perceived behavioral control is the degree of internal and external control over behavior. These attitudinal factors are then linked to psychological well-being, athletic performance, and academic performance in college student-athletes. This study unveils what factors during intercollegiate athletics account for their improved psychological well-being, leading to better athletic and academic performance. The results of this study can stimulate further research on student-athlete welfare and contribute to developing evidence-based intercollegiate athletics programs. Practically, implementing these factors and ideas to strengthen or expand student-athlete psychological well-being programs can be offered.

Literature Review

Self-Determination for Planned Behavior

Motivational and behavioral theories propose models that expound the antecedents and consequences of motivation for physical activity adherence (Keshtidar & Behzadnia, 2017). One compelling theory is SDT, which describes the effects of socio-contextual factors on individual decisions at the behavioral level. SDT posits human motivation is a necessary dimension of social context, leading to expanded interactions and behaviors (Deci & Ryan, 1985). The theory suggests incentivized motivation regulations trigger individuals' values and commitment, leading to participation in the desired activity (Deci & Ryan, 2000).

Two categories of motivation entail intrinsic (integrated and identified motivations for internal value) and extrinsic (activity for instrumental outcomes; Ryan & Deci, 2018). Intrinsic motivation, also known as autonomous motivation or free choice, involves self-reports of interest and enjoyment of rewarding activities (Good et al., 2022). Having control over one's activities (autonomous orientation), feeling competent in performing them (competence), and experiencing a sense of belonging during the performance (relatedness) lead to intrinsic motivation (Deci & Ryan, 1985).

Autonomy is less activated in extrinsic motivation because behaviors are caused by external factors. When externally regulated or rewarded, this type of motivation is controlled by expectations from others (Ryan & Deci, 2000). Extrinsic motivation is reward-based feedback that individuals internalize to trigger mobilization. Motivation with autonomy is on a continuum from low (extrinsic) to high (intrinsic). When motivation is incentivized (i.e., motivation brings physical and mental compensation with control), individuals are willing to participate and maintain the behavior because it is worthwhile (Pellizzoni et al., 2015). Initially, extrinsic behaviors can evolve into autonomous ones if basic psychological needs are met (Ryan & Deci, 2000). In control orientation, behaviors are organized with respect to external or internal

controls. Highly control-oriented people tend to act due to extrinsic rewards (e.g., pay raises, status upgrades, benefiting others).

Motivation undergoes affective and cognitive processing phases before reaching behaviors. Motivation can elicit attitude formation, external mobilization such as subjective norms, and perceived behavioral control, all of which can impact psychological well-being. TPB elaborates on these phases, assuming behavioral intentions or behaviors are influenced by attitude, subjective norms, and perceived behavioral control (Ajzen, 1991; St Quinton, 2022). TPB posits that behavior is predictable when it aligns with one's values (Gu et al., 2022).

The integration of SDT and TPB occurs at the intersection of autonomous motivation, reward-based external motivation, adaptive outcomes, and behavioral persistence (Pasi et al., 2021). Each theory complements the other to strengthen the procedures from motivation to behavior. SDT is limited in detailing the mobilization phase between motivation and behavior (Sweet et al., 2012). TPB can elaborate on the mobilization phase by adding intrapersonal and interpersonal components, including attitudes, important others' influence, and perceived behavioral control (Ajzen, 1991). Through this integration, internal and external human communication processes detail the factors influencing behavior.

Specifically, intrinsic and extrinsic motivation foster supportive interpersonal environments, leading to affirmative attitude formation, subjective norms, personal control, and adaptive consequences (Lonsdale et al., 2009). In turn, while mobilizing the motivation cognitively and affectively, an individual activates internal attitudes, adopts others' evaluations (subjective norms), and builds belief to perform behavior (Ajzen, 1991). One distinction between extrinsic motivation and subjective norms should be noted. Reward-based extrinsic motivation differentiates subjective norms, as the former involves voluntary acceptance of external regulations for personal improvement (instrumental value; Bear et al., 2017). In contrast, the latter involves social pressures regulating performance in social interactions.

Therefore, SDT explains why social actors form beliefs and seek behavioral outcomes. TPB supplements SDT by articulating the process from motivation to action through control (Hagger & Chatzisarantis, 2009). In the integrative typology of SDT and TPB, psychological well-being is a key factor facilitating the transition from motivation to behavior (Hedlund et al., 2022). From this theoretical integration, this study examines the process from motivation through attitudes, subjective norms, perceived behavioral control, psychological well-being, and athletic and academic performance.

Factors Influencing Athletic Performance and Academic Performance

Success in their activities is the foremost interest of student-athletes participating in intercollegiate athletics (Saarinen et al., 2025). High performance in athletic or academic areas can give student-athletes confidence in their future (D'Agostino & Munroe-Chandler, 2025). Understanding the factors that positively influence

athletic and academic performance can offer insights into what facilitates or impedes behavioral outcomes. Drawn from the factors of SDT and TPB, significant relationships among the factors can be elucidated in a student-athlete context.

Related research highlights the influence of motivation on attitudes, subjective norms, and perceived behavioral control in student-athletes. For instance, enthusiasm for a para-sport event not only enhances enjoyment but also strengthens the desire to return (Kim et al., 2023). This motivation extends beyond the individual, influencing social norms through social relation management (Manning, 2011). Regarding the relationship between motivation and perceived control, the drive to participate in leisure activities boosts students' confidence in controlling their actions, leading to their intentions (Polet et al., 2021). Well-being is also activated by motivation. Immersed in the psychological state of flow, athletes and exercisers find their performance and well-being significantly enhanced (Goddard et al., 2023). At the behavioral level, athletes' motivation for human interactions contributed to better athletic performance (Marvin et al., 2022) and superior academic achievements (Ito & Umemoto, 2022). In this view, motivation in SDT underpins TPB's cognitive and affective factors in student-athletes (Pacres & Babiera II, 2025).

In the context of student-athletes within TPB, attitude is crucial in explaining psychological well-being, athletic performance, and academic performance (Chappell et al., 2021; Zanin et al., 2022). For example, students with positive attitudes toward recommended medication tend to achieve better academic performance (Ponnet et al., 2015). Additionally, incorporating academic expectations in sports academies has fostered motivation, positive attitudes toward baseball, and educational achievements (Franz & Cook, 2020). Thus, motivation from SDT and attitude from TPB are integral in accounting for behavioral performance.

Important others, such as family or coaches, and the ability to control behavior also influence student-athletes' well-being (Mascret et al., 2022; Ling et al., 2019). Further, college students' physical activity participation, influenced by subjective norms, helped their high academic achievement (Linder et al., 2018). However, student-athletes tend to perceive false subjective norms, believing their peers do not see athlete friends as academically motivated. As such, athletes likely conform to the perception leading to academic underperformance even though they have positive attitudes toward academic achievement (Levine et al., 2014). Additionally, college student-athletes' academic performance is negatively affected by stereotype threats (e.g., intellectually less motivated; English & Kruger, 2020). When planned behaviors were adequately controlled by individuals (e.g., 'I can do the sport well'), psychological well-being followed (Ling et al., 2019). College sport management majors with high perceived behavioral control showed strong athletic identity and academic performance (Lumpkin et al., 2017). Like perceived behavioral control, students' self-efficacy enhanced athletic performance among competitive springboard and high board divers (Pattinson et al., 2017). Therefore, TPB's subjective norms and behavioral control are well-described in their influence on well-being and behavioral performance in student-athletes.

From the sports psychology perspective, there is a robust connection between psychological well-being and athletic and academic performance (McCoy & Rupp, 2021; Roncaglia, 2017). As an example, fulfilled self-determined needs help develop strong athletic identities, improving psychological well-being and performance (van Rens et al., 2019). In another study, brainwave monitoring and treatments have improved psychological well-being and performance in kickboxing athletes (Rydzik et al., 2023). This research evidence attests to positive connections between well-being and behavior in the context of TPB and SDT.

In summary, motivations to engage in athletics foster positive attitudes, subjective norms, and a sense of perceived control. These attitudinal factors influence student-athletes' well-being and performance. The paths from motivation to behavior indicate SDT and TPB are well-aligned within student-athlete populations, forming a cohesive relational model.

Hypothesized Model

Integrating SDT and TPB in a student-athlete context shows individual components of motivation, attitudes, subjective norms, and perceived behavioral control precede psychological well-being, athletic performance, and academic performance. Internal and external interactions are anticipated to be related to actionable outcomes. The corroborative relationships among them in student-athletes' lives can be constructed as a conceptual model for sequential influences. In a path model, this study examines the factors that explain psychological well-being leading to enhanced athletic and academic performance among college student-athletes. A path model accounts for influencing relationships, allowing the identification of the most significant factors for outcomes (Streiner, 2005). The hypothesized model (Figure 1) and hypotheses guiding the approach are posed below.

H1: Student-athletes' a) intrinsic and b) extrinsic motivation for collegiate athletics will be positively related to a) attitudes, b) subjective norms, c) perceived behavioral control, d) psychological well-being, e) athletic performance assessments, and f) academic performance assessments.

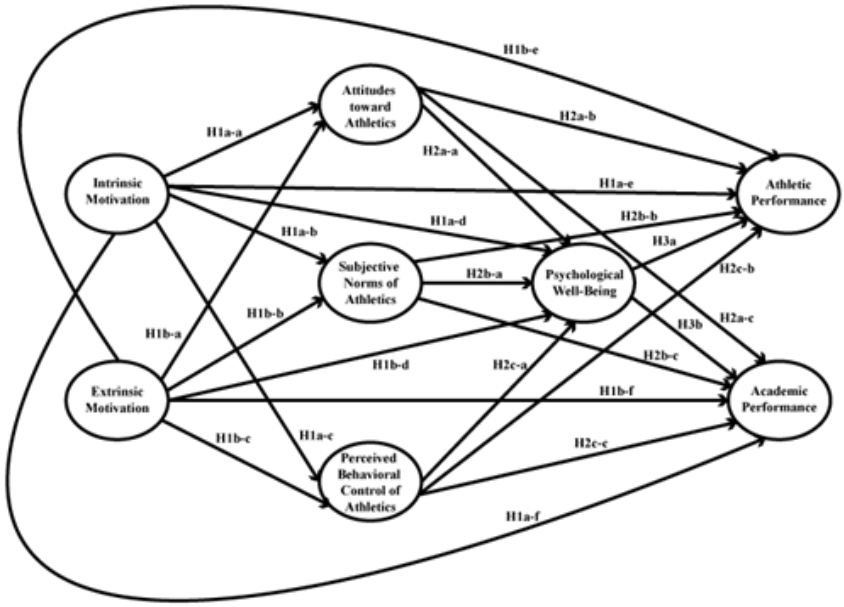
H2: Student-athletes' a) attitudes, b) subjective norms, and c) perceived behavioral control regarding participating in collegiate athletics will be positively related to a) psychological well-being, b) athletic performance assessments, and c) academic performance assessments.

H3: Student-athletes' psychological well-being will be positively related to a) athletic performance assessments, and b) academic performance assessments.

Method

To examine the hypotheses, this study used a mixed methods approach. The questionnaire consisted of closed-ended and open-ended questions. Operationally defined measures of each variable were included as scales to examine hypothesized

Figure 1.
Hypothesized Model of Motivation, Planned Behavior, Psychological Well-being, and Performance



relationships for quantitative analysis. Respondents were asked open-ended questions about motivations, attitudes, subjective norms, perceived behavioral control, psychological well-being, and performance. Their qualitative responses were used to supplement quantitative examinations of the variable relationships using the reflective thematic analysis (Braun & Clarke, 2021).

Data Collection

Data were collected from an online survey by contacting National Collegiate Athletics Association (NCAA) schools. Upon Institutional Review Board approval, the research team contacted the athletic departments of the 32 NCAA Division I conferences from August 20 to December 8, 2023, totaling 363 schools. Athletic directors and coaches were contacted via email to request their encouragement of student-athletes' survey participation. The list of contact information was obtained from the NCAA website. In the email message for student-athletes, each student-athlete participant was asked to complete the survey and provide their email addresses that were used to send a $20 Amazon e-gift card. As a result, 302 responses were collected, and 262 complete responses were used for analysis, a completion rate of 86.75%.

There were 76 (29.0%) male and 161 (61.5%) female student-athletes, with two who preferred not to say (0.8%) and 23 (8.8%) missing responses. The average age was 20 years old (*SD* = 1.56). The largest percentage of participants identified as seniors with 78 (29.8%), followed by freshmen (*n* = 64, 24.4%), juniors (*n* = 55, 21.0%), and sophomores (*n* = 44, 16.8%). Sports participated in include: Track and Field (71, 27.1%), Soccer (34, 13.0%), Cross-Country (24, 9.2%), Baseball (23, 8.8%), Aquatics (22, 8.4%), Softball (16, 6.1%), Basketball (12, 4.6%), Volleyball (11, 4.2%), Golf (19, 3.8%), Gymnastics (9, 3.4%), Tennis (8, 3.1%), Football (7, 2.7%), Field Hockey (5, 1.9%), Rugby (5, 1.9%), and Lacrosse (1, 0.4%). See Table 1 for full demographics.

Measurements

The questionnaire consisted of closed-ended and open-ended questions asking student-athletes about motivation, attitudes toward collegiate athletics, subjective norms, perceived behavioral control, psychological well-being, athletic performance, academic performance, sex, age, school year, and participating sports (See Appendix A for scale items and open-ended questions).

Intrinsic and Extrinsic Motivation

Following Ryan and Deci (2000) and Lilleker and Koc-Michalska (2017), this study measured respondents' motivational feelings toward participating in collegiate athletics (from 1 = strongly disagree to 5 = strongly agree). Intrinsic motivation (three items) indicates personal inner feelings that participation in collegiate athletics would be self-fulfilling (autonomy), competent (competence), and have a positive influence on others (relatedness). Extrinsic motivation (three items) is the belief that others encourage student-athletes' participation in collegiate athletics for instrumental value (approval, recognition, and benefit).

Attitudes toward Collegiate Athletics

A measure of evaluative disposition toward collegiate athletics was garnered from past research (Ajzen, 1991; Suntornsan et al., 2022). Respondents' degree of favorability toward collegiate athletics was collected in five items (from 1 = strongly disagree to 5 = strongly agree).

Subjective Norms

This study assesses student-athletes' subjective norms, operationally defined as the degree to which important others influence participating in collegiate athletics (from 1 = strongly disagree to 5 = strongly agree; five items; Wykes et al., 2022).

Perceived Behavioral Control

The level of willingness to participate in collegiate athletics was measured as perceived behavioral control. The scale was obtained from related past research that studied student-athletes' confidence in athletics (from 1 = strongly disagree to 5 = strongly agree; five items; Palmer et al., 2005).

Table 1. Demographic Distribution and Athletics Information (n = 262)

	Total	Mean (SD)	Frequency	Percentage
Sex	262 (100%)			
Male			76	29%
Female			161	61.5%
Prefer not to say			2	0.8%
No response			23	8.8%
Age	262 (100%)	20 (1.56)	240	91.8%
No response			22	8.2%
School years	262 (100%)			
Freshman			64	24.4%
Sophomore			44	16.8%
Junior			55	21.0%
Senior			78	29.8%
No response			21	8.0%
Athletics	262 (100%)			
Track and field			71	27.1%
Soccer			34	13.0%
Cross-country			24	9.2%
Baseball			23	8.8%
Aquatics			22	8.4%
Softball			16	6.1%
Basketball			12	4.6%
Volleyball			11	4.2%
Golf			10	3.8%
Gymnastics			9	3.4%
Tennis			7	2.7%
Football			7	2.7%
Field hockey			5	1.9%
Rugby			5	1.9%
Lacrosse			1	0.4%
No response			4	1.5%

Psychological Well-being

Following the scale developed by Ryff and Keyes (1995), this study assessed psychological well-being as the degree of a positive mindset in life from personality to life aim, achievements, relationships, responsibility, learning, and value (from 1 = strongly disagree to 5 = strongly agree; 18 items).

Self-Assessments of Athletic Performance

Due to the limited circumstance of collecting student-athletes' athletic performance data, this study measured student-athletes' self-assessments of athletic performance. This study used a shortened version of the athletic performance scale (Pedersen & Manning, 2003). The scale consists of a self-assessment of athletic performance, including the desire to play, desire to succeed, responsibility to play, work ethic, and readiness for competition (from 1 = strongly disagree to 5 = strongly agree; 12 items).

Self-Assessments of Academic Performance

Due to the restrictions of collecting student-athletes' academic performance data, this study collected their self-assessed academic performance. Student-athletes self-evaluated their academic performance in terms of writing, reading, class participation, and competence (Lam & Kolic, 2008). A total of ten items were asked (from 1 = strongly disagree to 5 = strongly agree).

Participating Athletics

This study utilized a list of sports from a previous study (Karpinski & Milliner, 2016) to ask respondents to indicate their athletic program. This measure was used to analyze the distribution of athletic participation among the participants.

Open-Ended Questions for Reflective Thematic Analysis

This study also collected written responses from student-athlete participants for thematic content analysis. Drawn from the theoretical discussion, this study collected student-athletes' written responses regarding their evaluations of motivation, attitudes, subjective norms, perceived behavioral control, psychological well-being, athletic performance, and academic performance. These questions aimed at participants' candid narrative responses, which were not collected from the quantitative measurements. In the survey, each respondent was asked to provide written responses to the questions about motivation, attitude, subjective norms, perceived behavioral control, psychological well-being, self-assessments of athletic performance, and self-assessments of academic performance (see Appendix A for questions). These open-ended questions were used for a reflective thematic analysis.

Analysis Plan

For quantitative data analysis to examine hypotheses, this study used R packages (e.g., lavaan) for path analysis. Cronbach's alphas for scale reliabilities were

obtained. All items of each scale were summed and averaged to create composite variables. Each variable was entered in a path analysis to examine the hypothesized relationships.

For qualitative data analysis from written responses, this study used a deductive approach to the reflective thematic analysis based on the open-ended questions drawn from theories (Braun & Clarke, 2021). The two researchers cross-checked the data and analysis to ensure reliability. The thematic analysis underwent multiple phases (Šramová & Pavelka, 2023). Following the phases built by Braun and Clarke (2021), in Phase 1 ("data familiarization and writing familiarization"; p. 331), the two researchers perused the written responses for data and wrote familiarization notes. In Phase 2 ("systematic data coding"), the researchers chose the reflective data coding method (Braun & Clarke, 2021, p. 331). This coding method suggests the process should be open and organic, and themes are the final outcomes of iterative theme development. The method is a situated interpretative reflexive process. From this, keywords were sorted into small chunks of meaning that addressed each variable. In Phase 3 ("generating initial themes"; Braun & Clarke, 2021, pp. 331), themes were drawn from the word chunks of each question. In Phase 4 ("reviewing themes"; Braun & Clarke, 2021, pp. 331), the researchers reviewed and developed the preliminary themes from Phase 3. The researchers agreed with the developed themes. Those themes were defined and named based on SDT and TPB in Phase 5 ("refining, defining, and naming themes"; Braun & Clarke, 2021, p. 331). Finally, the themes were represented as a summary in Phase 6 ("writing the report"; Braun & Clarke, 2021, p. 331).

Respondents' answers were analyzed through word clouds in R. Second, the two researchers reviewed the responses and derived themes for the responses of each variable question (e.g., motivations, attitude, subjective norms, perceived behavioral control, well-being, and performance). The themes were elaborated on exemplary responses to verify the representation of each variable, identifying the themes that capture the main points in the responses using the reflective thematic analysis (Braun & Clarke, 2021).

Results

Hypotheses Examination

A Pearson bivariate correlation analysis among the measures was conducted to check the potential relationships of the exogenous variables (motivations) with endogenous variables (attitude, subjective norms, perceived behavioral control, psychological well-being, athletic performance, and academic performance; Table 2). Intrinsic motivation (IM), extrinsic motivation (EM), attitude (AT), subjective norms (SN), perceived behavioral control (PBC), psychological well-being (WB), athletic performance (ATP), and academic performance (ACP) were highly associated with each other and significant, indicating the possibility of explaining the proposed model.

For the model examination, this study used R packages for the measures and covariates (sex, age, and school year). The model estimated the variances of

exogenous variables (intrinsic and extrinsic motivation). Endogenous variables' residual variances and covariances were estimated. At the first attempt without modification indices, the model fit indices yielded acceptable levels with one index (RMSEA) at a marginal level (Figure 2).

Table 2. Correlations between Independent and Dependent Variables, Means, Standard Deviations, and Reliabilities

	1	2	3	4	5	6	7	8
1. Intrinsic Motivation	1							
2. Extrinsic Motivation	0.79 ***	1						
3. Attitude toward Athletics	0.91 ***	0.76 ***	1					
4. Subjective Norm of Athletics	0.72 ***	0.66 ***	0.75 ***	1				
5. Perceived Behavioral Control of Athletics	0.78 ***	0.62 ***	0.82 ***	0.77 ***	1			
6. Psychological well-being	0.64 ***	0.64 ***	0.65 ***	0.62 ***	0.73 ***	1		
7. Athletic Performance	0.60 ***	0.54 ***	0.60 ***	0.53 ***	0.67 ***	0.74 ***	1	
8. Academic Performance	0.29 ***	0.31 ***	0.28 ***	0.27 ***	0.27 ***	0.50 ***	0.51 ***	1
M	4.44	4.02	4.47	4.29	4.59	4.09	4.62	4.05
SD	0.94	0.97	0.92	0.92	0.84	0.69	0.67	0.75
Cronbach's Alpha	0.90	0.86	0.95	0.92	0.95	0.94	0.97	0.91

*$p < .05$. **$p < .01$. ***$p < .001$.

H1 examined the relationships between motivation and subsequent variables. IM positively explained AT (β = 0.79, $p < .001$), SN (β = 0.52, $p < .001$), PBC (β = 0.76, $p < .001$), and ACP (β = 0.26, $p < .05$). IM was not related to WB (β = -0.03, $p > .05$). EM was significantly associated with AT (β = 0.13, $p < .01$), SN (β = 0.31, $p < .001$), WB (β = 0.37, $p < .001$), but not with PBC (β = 0.02, $p > .05$), ATP (β = 0.15, $p > .05$), and ACP (β = 0.07, $p > .05$). Therefore, H1 (a) IM – (a) AT, (b) SN, and (c) PBC were supported. H1 (a) IM – (d) WB and (e) ATP were not supported. H1(a) IM – (f) ACP was supported. H1 (b) EM – (a) AT and (b) SN were supported. H1 (b) EM – (c) PBC was not supported. H1 (b) EM – (d) WB was supported. H1 (b) EM – (e) ATP was not supported. H1 (b) EM – (f) ACP received no support.

H2 examined positive relationships between AT, SN, PBC, WB, ATP, and ACP. The results found AT and SN were unrelated to any dependent variables. PBC positively explained WB ($\beta = 0.52$, $p < .001$) and was negatively associated with ACP ($\beta = -0.32$, $p < .001$). H2 (a) AT – (a) WB, (b) ATP, and (c) ACP received no support. H1 (b) SN - (a) WB, (b) ATP, and (c) ACP received no support. H1 (c) PBC – (a) WB received support. H1 (c) PBC – (b) ATP was not supported. H1 (c) PBC – (e) ACP was not supported. **H3** suggested student-athletes' WB would positively explain ATP and ACP. As the results showed, WB was significantly related to ATP ($\beta = 0.49$, $p < .001$) and ACP ($\beta = 0.52$, $p < .001$). H3 WB – (a) ATP was supported. H3 WB – (b) ACP was supported.

Student-athletes who have intrinsic motivation build perceived self-control of athletics. They have high psychological well-being, leading to successful athletic and academic performance evaluations. When student-athletes feel good about athletics and are able to influence others, their confidence level in athletics, determining minds, and self-control are heightened. Such self-motivated feelings and experiences produce positive psychological well-being and successful athletic and academic performance. Extrinsic motivation can drive psychological well-being, producing satisfactory athletic and academic performance. Student-athletes' altruistic feelings that they can contribute to the benefit of others raised self-confidence in collegiate athletics, which contributed to successful college life.

Reflective Thematic Analysis

Motivations: Self-Growth and Supportive Inspiration

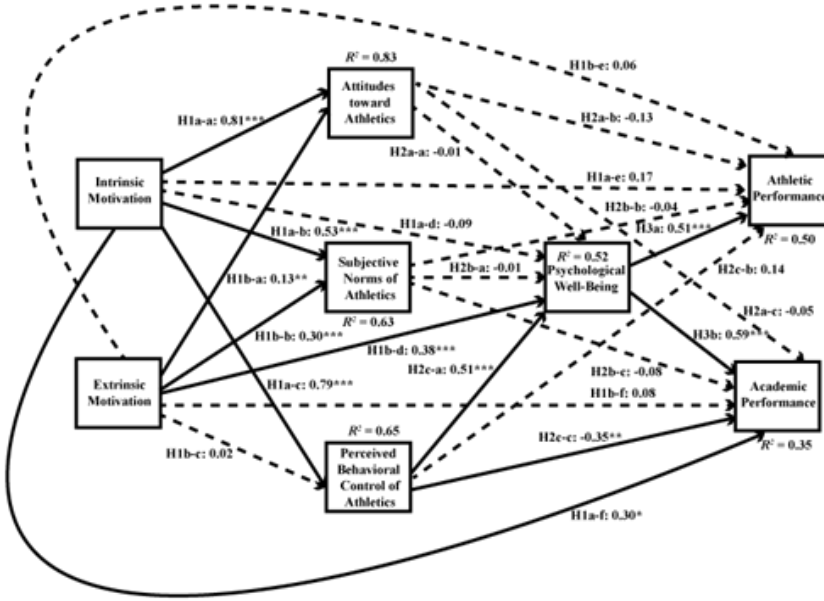
As the second phase of analysis, student-athletes' written responses were thematized. Following the six analysis phases (Braun & Clarke, 2021), self-growth was the first prominent theme under intrinsic motivation. Student-athletes participate in athletics for self-development, motivation, importance, love for sports, and self-fulfillment. A respondent mentioned, "College athletics is about trying to push myself to be the best that I can be and growing up."

In extrinsic motivation, the supportive inspiration theme represented the concept. With belongingness, role models, and family pride, student-athletes valued voluntary encouragement from parents and family. For example, one response is, "What motivates me most is making my family proud. I grew up in an environment where my dad played professionally, and now my brother plays too."

Attitude, Subjective Norms, and Perceived Behavioral Control: Growing Experience, Pressure, Burdensome Responsibility, and Success Mindset

As to attitudes, both upsides and downsides were mentioned. As the theme was positive, they had positive attitudes toward the growing experience. They learned lessons, growth, teammates, competitiveness, rewards, and social standing. A student expressed, "Nothing but positive. I am who I am today and in grad school because of collegiate athletics. It gave me a new home and family." On the negative side theme, pressure was prominent. They felt stressed, overwhelmed, anxious, lost, and pressured: "College athletics can be difficult because it takes up a lot of time, so you have to work twice as hard to build a competitive resume against someone who does

Figure 2.
Path Model Test Results.



Note. Model Indices: Chi^2 = 15.39. Degrees of Freedom = 5. p = 0.009. Comparative Fit Index (CFI) = 0.99. Tucker-Lewis Index (TLI) = 0.92. Root Mean Square Error of Approximation (RMSEA) = 0.09 (marginal). Standardized Root Mean Square Residual (SRMR) = 0.04.

not play sports."

The theme for subjective norms was summarized as burdensome responsibility. This is different from extrinsic motivation because they viewed subjective norms as duties, weights on their shoulders, and involuntariness. When the expectations and pressures from parents, coaches, teammates, and friends come as a controlled influence rather than self-motivation, they do not play a positive role in psychological well-being or performance. They were conscious of how others viewed them: "I want to say yes because I feel like I would be a disappointment if I were to quit."

Perceived behavioral control showed the most consistent responses. Student-athletes agreed the 'I can do' spirit was interpreted as a success mindset. They set the mind control for recovery from setbacks. Their willingness was the priority: "Yes. No coaches are going to motivate you if you don't want to do it. It is very athlete-driven to be good."

Well-Being: Disciplined Fulfillment

Psychological well-being reminded student-athletes of the disciplined fulfillment theme. They had goalsetting, fulfillment, purpose, resilience, compassion for

themselves, experience, work ethic, confidence, a sense of community, and rewards in their evaluation of psychological well-being. A respondent agreed that athletics affects psychological well-being by mentioning mindfulness, "I do believe it affects my well-being because it has become something I can use to bring me peace when I am stressed or worried in other areas of life."

Athletic and Academic Performance: Self-Identity and Intellectual Accomplishments

Student-athletes responded that the prevailing theme for athletic performance is self-identity. They had self-worth, survival, self-testament, a huge part of college life, and a connection with academic performance through desired athletic outcomes. A student-athlete emphasized identity,

> My athletic performance is extremely important to me as a student-athlete. Being a D1 athlete is a big part of my identity that I am proud of, and I want to use my talents and opportunities the best I can.

Lastly, academic performance was themed as intellectual accomplishments. They had mental satisfaction, the symbol of college life success, the whole reason for college, knowledge, skills, scholarships to stay in the program, future careers, and mental stability. In response, a student-athlete recognized the importance of academic performance, "On a larger scale, I recognize that the most important part of my time in college is getting my degree and other important skills and connections to set myself up for a successful future." A visual presentation of the main keywords for each variable in word clouds is displayed in Figure 3.

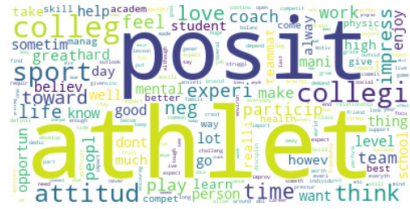
When comparing model test results and written responses, student-athletes' self-growth, achievement, love for sports, and enjoyment motivations led to better academic performance. Families' inspirational encouragement and role models developed student-athletes' self-determination, joy in life, well-roundedness, confidence, and keeping hungry. Student-athletes' 'I can do' spirit also explained psychological well-being, such as overcoming hard times and working through the most challenging times. With psychological well-being met, they can do better in athletic performance because it defines them, takes up a large portion of campus life, and permeates all aspects of their lives. Psychological well-being also leads to the views that academic performance 1) is what they want to be as a person, not just as an athlete; 2) lasts forever, but athletics only lasts a few years; 3) shapes their futures; and 4) affects athletic performance.

Discussion

This study aimed to discover factors influencing student-athletes' better athletic performance and academic performance. An integrated model examination and reflective thematic analysis of written responses affirmed the pivotal role of psychological well-being. Both intrinsic and extrinsic motivations of SDT influenced

Figure 3.
Keywords from Word Cloud for Each Variable

Motivations



Attitude

Subjective Norms

Perceived Behavioral Control

Psychological well-being

Athletic Performance

Academic Performance

their TPB factors, indicating student-athletes' motivational states do not provide refined explanations for performance without attitude, subjective norm, perceived control, and psychological well-being. The reflective thematic analysis refined and detailed the significant and nonsignificant relationships found in the quantitative analysis.

Internally, self-growth and life goal achievements triggered high academic performance because the results are rewarding and can influence others in collegiate athletics (H1). Their love for athletics motivated them to be an example for others and succeed academically (Zheng, 2022). Intrinsic motivation also drove positive attitudes, subjective norms, and perceived control (H1). In related research on athletic rehabilitation, student-athletes' perceptions of mastery and performance climate

were positively related to intrinsic motivation efforts, whereas tension pressure was negatively related (Brinkman-Majewski & Weiss, 2018). As such, student-athletes tend to prefer an encouraging and positive environment triggered by self-rewarding intrinsic motivation. A sense of purpose in athletic life can be redefined by motivation because it can guide them to thrive in sports and life (Houltberg & Scholefield, 2020). Another notable finding is the relationship between extrinsic motivation, subjective norms, and perceived control. Both rewarding motivations from outer sources (extrinsic) and relatively controlled influences from others (subjective norms) are positively connected. However, they are not translated into subsequent psychological development, possibly because controlled influences can adversely affect student-athletes' needs (Viksi & Tilga, 2022). This interpretation supports the findings of this study found in H2. Extrinsic motivation is not linked with self-confidence in athletics, but intrinsic motivation is. Student-athletes' self-fulfillment motivation can trigger a positive mindset.

Unlike the original expectations, attitude and subjective norms were not associated with psychological well-being (H2). Only perceived control was linked to psychological well-being. The results suggest student-athlete respondents view attitude and subjective norms from multiple angles. For instance, their qualitative responses presented positive and negative attitudes toward collegiate athletics. Although collegiate athletics provides growth, lessons, competitiveness, rewards, and social standing, it also generates anxiety, depression, tension, anger, fatigue, isolation, and pressure (Mathews et al., 2021). Student-athletes can develop favorable attitudes toward sports as well as help-seeking attitudes caused by mental and physical challenges (O'Keeffe, 2023). Therefore, not all attitudinal responses support improved psychological well-being because attitudes were interpreted as having upsides and downsides. Additionally, subjective norms were viewed as social influence and social pressure, which did not contribute to fostering psychological well-being, athletic performance, and academic performance. The results imply that autonomous support and influence are preferred in the process of student-athletes' psychological well-being development (Pynnönen et al., 2023).

Hence, this study's results show support for increasing positive attitudes (rewarding and growth) and mitigating negative attitudes (mental pressure) is necessary for student-athletes. A reason for the disconnection between subjective norms and psychological well-being can be explained as others' misperceptions (Levine et al., 2014) about student-athletes and duties rather than voluntary encouragement. External pressure for performance hindered student-athletes' psychological well-being, while self-compassion promoted it (Adam et al., 2021).

A notable association with intrinsic motivation is found in perceived behavioral control. Student-athletes' resilience, confidence, and 'never give up' approach encourage them to go further than their original goals and build positive mindsets for desired athletics participation (Nazlek, 2018). As seen in the results, self-growth and a confident mindset indirectly influenced athletic performance through psychological well-being. However, the opposite was true for the direct relationship between perceived control and academic performance. Therefore, a robust going-

forward mindset helped student-athletes form personal life satisfaction with purpose, fulfillment, positive thinking, and goal setting, thereby enabling them to perform better athletically. In turn, an independent athletic identity with confidence develops psychological well-being (van Rens et al., 2019). In the case of academic performance, a self-development need and a positive influence on others were better motivators, indicating they perform better in academic learning when they believe their athletic motivation is for social good.

Extrinsically, inspiration from role models rather than pressure from important others for better performance was important in developing psychological well-being, leading to successful athletic and academic performance. Extrinsic motivation is a motivational state formed by inspiration for rewarding outcomes. Subjective norms are verbal or behavioral encouragements to participate in collegiate athletics. Therefore, extrinsic motivation involves more voluntary actions than subjective norms. Student-athlete respondents in the current study believe voluntary influences from role models are more powerful than mere encouragement for psychological well-being, athletic performance, and academic performance. The influence of role models also means emotional support networks can explain satisfied psychological well-being and performance (Szarabajko et al., 2023).

As a bridging agent, psychological well-being was critical in enhancing student-athlete respondents' athletic and academic performance (H3). Having independence, psychological control, and confidence, self-determination can play a significant role in athletic performance. In turn, mindfulness training can be an effective program for student-athletes to be self-motivated, manage their minds and spirits, and lead to improved athletic outcomes (Mojtahe et al., 2023). Supportive networks enhance an athlete's emotional well-being, ultimately leading to better athletic performance and overall success (Szarabajko et al., 2023). Previous research supports the current study's findings on the relationship between psychological well-being and academic performance, stating that psychological well-being plays a constructive role in facilitating academic achievement in students' physical activities (Visier et al., 2022).

To improve the adverse attitude toward athletics, programs that alleviate student-athletes' stress, anxiety, and pressure can be a productive action (Harris & Maher, 2023). Psychological health management is recommended through counseling, listening, coping skills, and voluntary participation in inclusive conversations. A high level of student-athletes' life satisfaction with sociability and extraversion facilitated their academic performance (Echemendia et al., 2019). Not only psychological well-being improvement programs but also times given to student-athletes to be social, self-develop, and communicate with role models formally and informally can enhance academic achievement.

The significance of this study lies in the role of psychological well-being. Psychological well-being bridged between attitudinal factors and student-athletes' performance in college. A supportive and positive environment surrounding student-athletes promoted self-motivation and success in their athletic and academic life. The results suggest both cognitive and emotional well-being, including humane experiences, encourage student-athletes to achieve their goals in college life.

Theoretical and Practical Implications

Integrating SDT and TPB enabled this study to examine motivation and attitudinal variables in a relational model. This integration gave a more comprehensive understanding of the factors influencing student-athletes' well-being and performance behaviors. SDT does not build its foundation without social actors (Lonsdale et al., 2009). The presence and influence of social actors are fundamental to the theory, highlighting the social context's contribution to motivation and behavior. This study included student-athletes' social actors (TPB factors) in their athletic lives to elaborate on the process from motivation to behavior.

Particularly, psychological well-being critically linked motivation with behavior in this student-athlete context. This result suggests well-being is pivotal in translating motivation into actual behavior. Motivation is followed by psychological and behavioral control because actions are anticipated as a result of self- or other-related experiences (Sánchez & García, 2021). In other words, the experiences related to oneself or others drive the anticipated actions.

Intrinsic and extrinsic motivations were two essential factors that prompted perceived behavioral control and psychological well-being in the current study. The combined model improved the relationships' explanatory power, which was impossible without them. The integration of these theories provided a more robust framework for understanding the dynamics between motivation, psychological well-being, and behavior.

Colleges' athletic departments and other supporting bodies can elaborate on student programs around self-growth, positive influence on others, inspiration, role models, self-confidence, mindfulness, self-determination, self-compassion, influence on others, long-term plans, and sociality. The results suggest student-athletes' success in college is closely tied to their psychological well-being. Focusing on psychological improvement through varying practices and programs can boost beneficial actions as well as motivations. Autonomous motivation and encouragement with exemplary inspiration, rather than controlled motivation and influence, can effectively enhance student-athletes' performance and success. Programs such as family days with respected parents, resilience training, and compassion initiatives can significantly enhance the psychological well-being of student-athletes (Kuchar et al., 2023).

Student-athletes need opportunities to meet with successful alums or professionals in a mentoring program for guidance, inspiration, and practical advice. Further, peer support groups can offer student-athletes the opportunity to share experiences and challenges in college life. Workshops can cover stress management and mindfulness to help student-athletes maintain their psychological well-being. If students are recognized for their athletic achievements and academic growth, such experience can motivate student-athletes to excel in college. Emotionally, community engagement opportunities, such as volunteering, are rewarding experiences for student-athletes.

The findings of this study suggest student-athletes value academic performance as well as athletic success. Therefore, athletic departments can provide student-

athletes with related resources and support for their future career planning. These efforts can help student-athletes successfully transition into their post-college lives.

Study Limitations

Some study limitations should be noted. While the decision not to ask NCAA Division I student-athletes about their specific affiliations was made to protect their privacy, knowing their athletic conferences would have provided an opportunity for comparison. Future research could include that information to elaborate on the level of psychological well-being, athletic performance, and academic performance by conference, sex, team sports, and individual sports. Well-being is a multidimensional concept, including clinical, physical, and social aspects. This study focused on psychological well-being only. Future research can measure expanded well-being, including clinical mental and physical and social well-being.

A larger sample size than the current (n = 262) may increase the external validity of study results. Daily communication with self and important others and self-evaluations were regarded as the main factors accounting for psychological well-being and performance in this study. Whether habitual or deliberate, media dependency is woven into the fabric of the public's life today. Student-athletes' use of media and personal networks through the media that influence their attitude, confidence, psychological well-being, and performance can be a topic of future studies.

Conclusion

In this study's key findings, feeling student-athletes are valued, growing, and being important to others in athletics leads to better psychological well-being followed by improved athletic performance and academic performance. Self-motivation and personal inspiration, rather than external pressures, are important indicators of better athletic and academic performance. Student-athletes can perform better in athletics and academics when these are fulfilled. When student-athletes are resilient, self-disciplined, fulfilled, purposive, compassionate, and confident, their balanced college life with the excellence of athletic and academic performance can be better ensured.

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Appendix A

Intrinsic Motivation (from 1 = strongly disagree to 5 = strongly agree)

1. I would personally feel good taking part in collegiate athletics.
2. I feel that my participation in collegiate athletics would be a sort of thing that my friends and family would respect me for.
3. I feel I could influence others in collegiate athletics.

Extrinsic Motivation (from 1 = strongly disagree to 5 = strongly agree)

1. Others would benefit from people like me taking part in collegiate athletics.
2. A number of my friends would also take part in collegiate athletics.
3. I would feel inspired by my friends to take part in collegiate athletics.

Attitudes toward collegiate athletics (from 1 = strongly disagree to 5 = strongly agree)

1. My active participation in collegiate athletics is a good thing.
2. My active participation in collegiate athletics sets a good example for other people.
3. My active participation in collegiate athletics helps me feel disciplined and proud of myself.
4. Active participation in collegiate athletics is valuable.
5. My active participation in collegiate athletics can make other people proud of me and earn their praise.

Subjective Norms (from 1 = strongly disagree to 5 = strongly agree)

1. My close friends think that I should participate in collegiate athletics.
2. My parents think that I should participate in collegiate athletics.
3. My classmates think that I should participate in collegiate athletics.
4. Most people who are important to me would agree that I actively participate in collegiate athletics.
5. Most people who are important to me encourage me to actively participate in collegiate athletics.

Perceived Behavioral Control (from 1 = strongly disagree to 5 = strongly agree)

1. I can actively participate in collegiate athletics.
2. I am confident that I can actively participate in collegiate athletics.
3. My determination to perform in collegiate athletics drives my participation in collegiate athletics.
4. It is entirely up to me whether I participate in collegiate athletics or not.
5. Even if I have obstacles, I still participate in collegiate athletics.

Psychological Well-being (from 1 = strongly disagree to 5 = strongly agree)

1. I like most parts of my personality.
2. When I look at the story of my life, I am pleased with how things have turned out so far.
3. Some people wander aimlessly through life, but I am not one of them.
4. I can handle the demands of everyday life.
5. In many ways I feel encouraged about my achievements in life.
6. Maintaining close relationships has been easy for me.
7. I live life gladly and really think about the future.
8. In general, I feel I am in charge of the situation in which I live.
9. I am good at managing the responsibilities of daily life.
10. I sometimes feel as if I've done all there is to do in life.
11. For me, life has been a continuous process of learning, changing, and growth.
12. I think it is important to have new experiences that challenge how I think about myself and the world.
13. People would describe me as a giving person, willing to share my time with others.
14. I try to make big improvements or changes in my life.
15. I am not influenced by people with strong opinions.
16. I have experienced many warm and trusting relationships with others.
17. I have confidence in my own opinions, even if they are different from the way most other people think.
18. I judge myself by what I think is important, not by the values of what others think is important.

Self-Assessments of Athletic Performance (from 1 = strongly disagree to 5 = strongly agree)

In my sport,

1. I utilize time away from practice and workout well.
2. I have a desire to play.
3. I utilize workout time well.
4. I have the attitude or desire to succeed.
5. I maintain a high level of physical conditioning.
6. I am motivated to succeed.
7. I take a personal responsibility to be ready to play.
8. I have a well-developed work ethic.
9. I have a desire to win.
10. I possess discipline.
11. I strive for perfection in the sport.
12. I prepare for competition.

Self-Assessments of Academic Performance (from 1 = strongly disagree to 5 = strongly agree)

In my schoolwork,

1. I write well.
2. I know how to study effectively.
3. I manage my time efficiently.
4. I can do mathematical problem-solving adequately.
5. I read books, journals, or articles for courses effectively.
6. I take notes in lectures skillfully.
7. I prepare for and write exams well.
8. I am good at doing research.
9. I make class presentations very clearly.
10. I participate in class discussions actively.

Open-ended questions

1. What motivates you to participate in collegiate athletics? Please write a short story about your motivated feelings for athletics.
2. What are your attitudes toward collegiate athletics? Do you have positive or negative impressions of your participating athletics? Can you explain why you have such an attitude?
3. Do important others around you influence your participation in collegiate athletics? If yes, how? If not, why?
4. Does your "I can do" spirit play an important role in participating in collegiate athletics, and how and why?
5. How do you believe collegiate athletics influences your life satisfaction and quality (well-being)? Please provide your opinion and experience.
6. How important is your athletic performance to you as a student-athlete? Does athletic performance take up a large portion of your college life? Please explain your opinion and evaluation.
7. How important is your academic performance to you as a student-athlete? Does academic performance take up a large portion of your college life? Please explain your opinion and evaluation.

JOURNAL OF INTERCOLLEGIATE SPORT

Revealing Mental Health in Student-Athlete Recruitment: Exploring Coach Perceptions and Bias

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Mental health issues (MHI) among student-athletes have increased in recent years, yet their true prevalence may be underestimated due to the negative consequences surrounding disclosure for athletes. Coaches play a crucial role in providing social support and reducing stigma, making their perspectives imperative to consider when studying student-athlete mental health. This study investigates how college coaches perceive mental health-related information in the transfer recruiting process. Through a 2 X 2 between-subjects online experiment (n = 155), we explore how student-athletes are perceived when their previous college coach does or does not indicate the athlete experiences MHI. Findings indicate a bias in how coaches report the performance of athletes with MHI, despite recognizing the need to avoid discrimination. These results highlight the dual challenge coaches face in managing their implicit biases and inclusive recruitment processes.

Keywords: student-athlete, athlete recruitment, mental health

Lauren Bernett was the starting softball catcher at James Madison University. Jayden Hill was a first-year Northern Michigan University female track and field athlete. Robert Martin was a fifth-year goalie for Binghamton University's men's lacrosse team. Katie Meyer was a star senior women's soccer player at Stanford University. Sarah Shulze was a celebrated runner on the women's track and cross-country teams at the University of Wisconsin-Madison. These five talented National Collegiate Athletics Association (NCAA) student-athletes tragically passed away from suicide in the spring of 2022 (Siefert, 2022). Student-athletes are often role models in managing intense, high-pressure environments and appear physically and mentally unbreakable. The glorified image of student-athletes–strong bodies, disciplined minds, and a competitive drive–may lead onlookers to downplay the seriousness of their susceptibility to mental health issues (MHI; Andone, 2022).

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Student-athletes report mental health stigma as one of the leading causes preventing them from disclosing or discussing MHI (Hilliard et al., 2022; Rao & Hong, 2020). Mental health stigma occurs when the label of a mental health disorder leads people to be perceived as less than whole, dangerous, unstable, and undesirable (Goffman, 1963). Though people may overtly express greater tolerance toward those with MHI, they may still have implicit biases (Greenwald & Banaji, 1995) that impact cognitive processes relevant to perception. Stigma trickles down to negatively impact one's self-esteem and sense of belonging (Corrigan, 2004). The lack of disclosure of MHI by student-athletes is not surprising, considering the historic denigration of student-athletes who sought mental health support (Linder et al., 1989, 1991). The denigration is intensified when the student-athlete receives a formal mental health diagnosis; athletes may be perceived as weak, unstable, and less valuable when they seek mental health services–the very antithesis of the mentally tough student-athlete stereotype (Merz et al., 2020). Indeed, Linder et al. (1991) found male undergraduates were significantly less likely to recommend an athlete for a draft who consulted a sports psychologist, counselor, or coach to improve performance. Although perceptions of athletes who work with sports psychologists have become more favorable, student-athletes who reveal (versus those who do not reveal) MHI are still viewed as less valuable and offered less money when signed in professional sports (Merz et al., 2020). Further evidence suggests stigma associated with MHI has lessened over time, most markedly for depression; however, it has not been completely eliminated (Pescosolido et al., 2021).

Given this, it is unsurprising student-athletes are hesitant to discuss or disclose MHI. Leaving these issues unresolved, coupled with the high expectations from themselves and others (e.g., coaches, family, athletic department), may lead student-athletes to keep pushing themselves to – and sometimes off – the edge (Brown et al., 2014). Therefore, it is critical to address potential mental health stigma among those who support student-athletes.

Literature Review and Theoretical Framework

Coach Support and Athlete Mental Health

Coaches are a primary support mechanism for student-athletes (Kroshus, 2019), and their destigmatization of MHI may have a considerable impact on encouraging help-seeking behavior (Bissett et al., 2020). Prior research emphasizes a coach's influence extends beyond athletic performance, playing a vital role in the overall well-being of student-athletes (Castaldelli-Maia, 2019). However, disclosing MHI to coaches can sometimes lead to perceptions of reduced performance or value to the team (Mertz et al., 2022). Coaches are also the primary gatekeepers to athletic scholarships for student-athletes, and their insight into an athlete's mental health may alter the likelihood of offering a spot on the team and a scholarship (Castaldelli-Maia, 2019). Research indicates that mental toughness is one of the most critical psychological factors linked to success in sport (Crust, 2007), and some research suggests mental toughness to be positively correlated with MHI (Gucciardi et al.,

2017), emphasizing the importance of mental health in the recruitment process for coaches. On the other hand, some of the most successful professional athletes of all time have experienced MHI, including Naomi Osaka, Simone Biles, Abby Wombach, Serena Williams, Aly Raisman, Kevin Love, Ronda Rousey, and Michael Phelps (McDowell, 2021). Coaches who stigmatize student-athletes with MHI might lose out on not only working with some of the greatest athletes but also on building successful teams. Conversely, college coaches may not have the time, desire, energy, or knowledge to deal with issues beyond ensuring their student-athletes push themselves to never-ending improvement and sports success.

The known presence of MHI stigma for athletes (Deatherage et al., 2022) makes the conversation about MHI in the recruiting process important to address. Research supports both the prevalence of MHI in student-athletes and the persistence of stigma. However, how these factors manifest in the context of college recruiting remains underexplored. The current study examines how mental health status, specifically when MHI is cited versus when it is not, is perceived by college coaches during the transfer recruiting process.

In the following section, we discuss the MHI prevalence among student-athletes. Guided by stigma theory (Goffman, 1963), we describe why college coaches, who play a pivotal role in supporting student-athletes' mental well-being (Powers et al., 2020), might stigmatize student-athletes with MHI.

Mental Health and Student-Athletes

Mental health, as defined by the NCAA, is a state of well-being that enables student-athletes to handle the demands of their various roles while also recognizing their potential in sports, academics, and other significant areas of their lives (NCAA, 2024a). There are over half a million student-athletes in the National Collegiate Athletic Association (NCAA; NCAA, 2022), with varying reports of MHI prevalence in this population. The most commonly reported MHI among student-athletes include anxiety, depression, and eating disorders (Hutchinson et al., 2025). The American College of Sports Medicine (2021) reports 30% of female and 25% of male student athletes experience anxiety, and more recent NCAA (2023) data shows a decrease in mental health concerns among student-athletes. From Fall 2021 to the 2022-23 academic year, male student-athletes feeling overwhelmed decreased from 25% to 17%, and female student-athletes feeling overwhelmed decreased from 47% to 44% (Radford, 2023). However, the NCAA (Henry, 2023) shared student-athletes reporting mental health issues is one and a half to two times higher than before the COVID-19 pandemic. In contrast, Abrams (2022) notes over 60% of the United States college students suffer from at least one mental health issue. Although student-athletes report lower levels of MHI compared to the general student population, athletes are more likely to engage in risk-taking behaviors (Nattiv et al., 1997), and impulsivity (Vaughan et al., 2021), making them more vulnerable to the negative outcomes of MHI (Pichler et al., 2023). Furthermore, student-athletes experience added levels of stress relative to non-athletes, despite not being reflected in the MHI prevalence

statistics. These stressors include adjustment to competing demands, coping with on-field success and failure, dealing with the end of their athletic career, injuries, a perceived loss of 'star status,' traveling for competition, and more (Cutler & Dwyer, 2020; Pritchard & Wilson, 2005).

Stigma Theory

Although 30% of college students generally seek help for their MHI, only 10% of student-athletes seek help (NCAA, 2023a; also see Velasco, 2017). Despite knowing where to go for mental health support, only 50% of student-athletes reported feeling comfortable seeking help (NCAA, 2023b).

Stigma remains one of the most significant barriers to help-seeking among student-athletes (Deatherage et al., 2022) and is reinforced by the broader societal stigma around mental health, as supported by Goffman (1963). Traits typically associated with successful athletes include high self-confidence and physical and mental strength (Bauman, 2016), and disclosing a mental health issue may seem contradictory to these hallmark traits of a high-performing athlete. Due to the contrast between stereotypes of those who suffer from MHI and stereotypes of successful athletes, we propose that college coaches during recruiting will perceive prospective student-athletes who cite (versus those who do not cite) MHI more negatively.

Method

Participants

One hundred eighty-eight coaches agreed to participate in the survey. Of these, we excluded 26 who did not finish the survey and seven who did not indicate they understood the instructions. The remaining 155 participants (see Table 1) were included regardless of their responses to items intended to serve as quality checks[1].

Inclusion Criteria

Participants included current and past college coaches from NCAA Divisions I, II, and III, the National Junior College Athletic Association (NJCAA) Division I and II, and the National Association of Intercollegiate Athletics (NAIA). Participants were eligible to participate if they had coached student-athletes involved in one of the major U.S. collegiate athletic associations (NCAA, NJCAA, and NAIA) in some

[1] We originally included three different manipulation checks. The first asked participants to select a box indicating they read the stimuli, but the high failure rate (N = 24) suggested that the box may not have been prominent enough to elicit responses. The second and third manipulation checks asked participants to report the mental health status and origin of the student-athlete they read about. Responses included the actual conditions as well as an "I do not remember" option. If the participants were in a condition in which no MI was mentioned, it would make sense that they selected "I do not remember" simply because the information was never presented. Twenty-seven participants in the no mental health condition failed the mental health check (29% within-condition failure rate), compared to only three in the mental health condition (5% within-condition failure rate). Likewise, 18 participants in the domestic condition failed the origin status question (23% within-condition failure rate) compared to 13 in the international condition (17% within-condition failure rate). Thus, we included participants regardless of their responses to the manipulation check.

capacity and were comfortable reading and writing in English. Recruitment occurred between October 31, 2022, and February 1, 2023. Given that recruitment mostly encompassed Division I coaches, the sample is predominantly representative of Division I coaches, reflected in the Governing Body and Division demographics in Table 1.

Direct Outreach and Snowball Sampling

Participants were recruited via word-of-mouth, snowball sampling (Patton, 1990), and direct outreach to participate in an online questionnaire conducted on Qualtrics. At the end of each questionnaire, participants were asked to provide the name and email of any other college coaches they thought would be willing to participate in the study.

Direct outreach was conducted via publicly available email addresses. Specifically, a Division I conference was randomly selected, followed by the random selection of a school within the conference. Emails were then sent to all coaches at that school, across all job titles, before proceeding to the next randomly selected conference. Approximately 3,500 coaches were invited to participate through direct outreach, with the remaining recruited via word of mouth and snowball sampling. Although direct outreach recruiting led to lower response rates compared to word-of-mouth or snowball sampling, it reduced the selection bias (Winship & Mare, 1992). The overall response rate was not collected.

Compensation

Upon completing the study, participants were compensated with a $10 Amazon gift card distributed via email.

Table 1
Demographic Information of College Coaches

Demographic Variable	*n* (%)
Gender of Coach	
Male	88 (56.8)
Female	64 (41.3)
Non-binary	1 (0.7)
Prefer not to say	2 (1.3)
Race/Ethnicity	
Asian	3 (1.9)
Black or African American	12 (7.7)
Hispanic/Latino	11 (7.1)
White	126 (81.3)
Another race not listed	3 (1.9)

Nationality	
Domestic	101 (65.2)
International	21 (13.5)
Dual US Citizen	3 (1.9)
No response	30 (19.4)
Coaching Role	
Head Coach	59 (38.1)
Assistant Coach	83 (53.5)
Volunteer Coach	6 (3.9)
Other	7 (4.5)
Gender of Teams Coached	
Both Men's and Women's	69 (44.5)
Men's	27 (17.4)
Women's	59 (38.1)
Governing Body and Division	
NCAA Division I	142 (67)
NCAA Division II	26 (12)
NCAA Division III	35 (16)
NJCAA Division I	5 (2)
NJCAA Division II	1 (.4)
NAIA	4 (2)

Note. $n = 155$. For coaches with multiple coaching roles, the most senior position is listed. Governing Body and Division is not mutually exclusive.

Procedure and Design

The Institutional Review Board approved this study prior to execution. Participants took part in an online survey focused on "Methods for Recruiting College Student-Athletes." They were told they would partake in a 10-minute study to learn more about how different student-athlete background characteristics influenced recruiting.

After reading the questionnaire information sheet and consenting to participate, participants were randomly assigned to receive one of four coach's reports of a current student-athlete interested in transferring to another program. The coach's report was presented as a screenshot of a voicemail transcript in iPhone format (for an example screenshot, see Appendix A). Participants were assigned one condition in a 2 (student-athlete origin: international vs. domestic) x 2 (mental health status: MHI cited vs. no MHI cited) between-groups factorial design.

Specifically, participants either viewed a student-athlete who the college coach described as either international (i.e., "I am calling about an international student-athlete who has just entered the transfer portal for their junior year.") or domestic (i.e., "I am calling about a domestic student-athlete who has just entered the transfer portal for their junior year."). The college coach also mentioned that the student-athlete either had MHI ("They have an interesting character and experience MHI") or did not mention MHI ("They have an interesting character."). The gender of the student-athlete was not described, and no revealing adjectives were given.

Limited, subjective information is intentionally provided in each voicemail to allow any mental health biases to become more apparent, as these biases may not surface with the availability of objective, comprehensive information (Greenwald et al., 2003). After reviewing one of four student profiles, the participants rated the student-athletes on several measures.

Measures

Recruiting Items

Subject matter experts (SME) consisting of three authors, one of whom is a sport psychologist and previous coach, and two of whom are current and former student-athletes, developed eight items to assess coaches' reactions to a prospective transfer student-athlete. These items were created to explore whether factors unrelated to MHI status might, in fact, be perceived differently due to stigma (Goffman, 1963; Pescosolido et al., 2021) associated with MHI. Coaches rated the prospective student on (1) value to the program, (2) likeability, (3) trustworthiness, (4) ability to perform under pressure, (5) worthiness to receive an athletic scholarship, (6) unreliability (reverse-coded), (7) likelihood of problematic behavior (reverse-coded), and 8) weakness (reverse-coded). These single-item measures were used to allow participants to rate the student-athlete on a number of dimensions in a time-efficient manner. Single-item measures are a reasonable alternative to multi-item measures and provide strong correspondence to multi-item measures (Matthews et al., 2022). See Appendix B for the exact wording of each item. In response to one of the four student profiles (Heilman, 1980), participants reacted to these eight items on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Coaches also indicated if they would follow up with the student on a single item with two responses ("Yes" or "No").

Open-Ended Questions

College coaches were also asked three open-ended questions to gather information on how they approach and view mental health in recruiting. These three questions include: a) If you follow up with this student-athlete, what questions would you like to ask them? b) How would this student-athlete contribute to your program? c) During recruiting do you try to get information on the mental health of the student-athlete? If yes, how do you get this information? The answers to these questions were

thematically examined. See Table 5 for open-ended questions and themes gathered from college coach responses.

Analytic Approach

For quantitative analyses, we conducted a 2 (student-athlete origin: international, domestic) x 2 (mental health status: MHI cited, no MHI cited) multivariate analysis of variance (MANOVA) on the eight dependent variables assessing coaches' responses to the student-athlete. We probed the significant effects of student-athlete MHI status on each outcome using pairwise t-tests. For all t-tests, we report both unadjusted *p*-values and *p*-values adjusted using the False Discovery Rate correction for Type I errors in multiple pairwise tests. Participants with missing data on any of the eight dependent variables were excluded from analyses, resulting in a quantitative analysis sample of 155 participants. Because we were restricted in data collection due to money and time constraints, we did not initially conduct a priori power analysis. Instead, we sought the advice of an independent researcher and asked them to conduct an a priori analysis using G*Power. Results indicated the required sample size to achieve 80% power for detecting a medium effect with α = .05 was n = 128 for a MANOVA testing global effects with four groups and eight response variables. Thus, our obtained sample size of 155 was adequate to test our hypotheses.

We used a summative content analysis approach for the qualitative analyses (Hsieh & Shannon, 2005). Different undergraduate research assistants blind coded each open-ended response for general themes and occurrences of themes. Each undergraduate research assistant was asked to code two questions, and we used eight coders. All coders were trained on content analysis prior to coding and were instructed to allow insights to emerge (i.e., category induction) as they read through participant responses. Frequency counts by theme were calculated and compared. A subject matter expert (AUTHOR 2 [initials blinded for review]) then reviewed the comments and themes generated by research assistants and assigned final thematic codes to each comment. Initial and resolved codes, as well as detailed code definitions, can be viewed in the data repository.

Transparency and Openness

We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study. A deidentified dataset (with potential identifiers redacted), analysis code, and research materials are available at https://osf.io/ptjfv/?view_only=839f02c7dacd4841b44d7a6d35ac988e. Data were cleaned and analyzed using R version 4.2.3 (R Core Team, 2023), *tidyverse* version 2.0.0 (Wickham, 2016), *openxlsx* version 4.2.5.2 (Schauberger & Walker, 2023), *scales* version 1.2.1 (Wickham & Seidel, 2022), *flextable* version 0.9.1, (Gohel & Skintzos, 2023), *psych* version 2.3.3 (Revelle, 2023), and *apaTables* version 2.0.8 (Stanley, 2021). This study's design and analyses were not pre-registered.

Results

Quantitative Results

Means, standard deviations, and correlations between study variables are presented in Table 2. A 2x2 MANOVA indicated the predicted multivariate interaction between student-athlete origin and mental health status was not significant, Pillai's trace = 0.02, $F(8, 141) = 0.31$, $p = .96$. There was, however, an overall significant main effect of student mental health status on overall evaluations, Pillai's trace = 0.23, $F(8, 141) = 5.31$, $p < .001$.

As shown in Table 3, pairwise comparisons suggested mental health status significantly impacted ratings of scholarship worthiness, $t(123.6) = -2.69$, $p_{adjusted} = .04$, $d = -0.44$ and problematic behavior, $t(121.8) = 3.16$, $p_{adjusted} = .02$, $d = 0.52$. Interestingly, and inconsistent with expectations, student-athletes with MHI were evaluated as more worthy of scholarship support and less problematic than those without MHI. After adjusting for the familywise error rate, some pairwise comparisons were marginally significant: valuable, $t(134.5) = 2.07$, $p_{adjusted} = .12$, $d = 0.34$, likable, $t(140.9) = 1.81$, $p_{adjusted} = .12$, $d = 0.29$, trustworthy, $t(144.1) = 1.63$, $p_{adjusted} = .12$, $d = 0.26$, perform well under pressure, $t(121.2) = 1.66$, $p_{adjusted} = .12$, $d = 0.28$, unreliable, $t(139.2) = 1.74$, $p_{adjusted} = .12$, $d = 0.28$. The remaining pairwise comparisons was not statistically significant: weak, $t(126.1) = -0.56$, $p_{adjusted} = .58$, $d = -0.09$.

Table 2

Means, Standard Deviations, and Bivariate Correlations Between Study Variables

Recruiting Variable	*M*	SD	1	2	3	4	5	6	7
1. Valuable	3.10	0.92							
2. Likeable	3.68	0.83	.53**						
3. Trustworthiness	3.49	0.82	.53**	.72**					
4. Scholarship worthiness	2.97	0.91	.41**	.31**	.31**				
5. Perform Well Under Pressure	2.64	0.78	.32**	.27**	.34**	.34**			
6. Unreliable	3.24	0.88	.48**	.50**	.56**	.27**	.26**		
7. Problematic	3.45	0.96	.50**	.51**	.58**	.25**	.30**	.69**	
8. Weak	3.50	0.95	.45**	.35**	.41**	.35**	.29**	.57**	.56**

Note. $n = 155$. *M* and *SD* are used to represent mean and standard deviation, respectively. * $p < .05$. ** $p < .01$.

Table 3
Means (Standard Deviations) and Pairwise Tests of Evaluations by Student Mental Health Status

Dependent Variable	Mental Health Issue Mentioned	Mental Health Issue Not Mentioned	Pairwise Comparison
Valuable	2.92 (0.90)	3.23 (0.92)	$t(134.5) = 2.07$, $d = 0.34$, $p_{adjusted} = .12$, $p_{unadjusted} = .04$
Likable	3.54 (0.78)	3.78 (0.85)	$t(140.9) = 1.81$, $d = 0.29$, $p_{adjusted} = .12$, $p_{unadjusted} = .07$
Trustworthy	3.37 (0.75)	3.58 (0.85)	$t(144.1) = 1.63$, $d = 0.26$, $p_{adjusted} = .12$, $p_{unadjusted} = .11$
Worthy of Continued Scholarship Support	3.21 (0.95)	2.80 (0.85)	$t(123.6) = -2.69$, $d = -0.44$, $p_{adjusted} = .04$, $p_{unadjusted} = .008$
Perform Well Under Pressure	2.51 (0.84)	2.73 (0.73)	$t(121.2) = 1.66$, $d = 0.28$, $p_{adjusted} = .12$, $p_{unadjusted} = .10$
Unreliable	3.10 (0.84)	3.34 (0.90)	$t(139.2) = 1.74$, $d = 0.28$, $p_{adjusted} = .12$, $p_{unadjusted} = .08$
Problematic	3.16 (1.00)	3.65 (0.88)	$t(121.8) = 3.16$, $d = 0.52$, $p_{adjusted} = .02$, $p_{unadjusted} = .002$
Weak	3.56 (1.00)	3.47 (0.92)	$t(126.1) = -0.56$, $d = -0.09$, $p_{adjusted} = .58$, $p_{unadjusted} = .58$

Note. Degrees of freedom vary due to item-level missingness. Effect estimates reflect the univariate effect of MHI status on outcomes. *d* indicates Cohen's *d* effect size estimates. Adjusted *p*-values reflect *p*-values adjusted for multiple comparisons using the False Discovery Rate method. We report unadjusted *p*-values as well for the sake of full reporting.

Qualitative Results

Themes, frequencies, and exemplary quotes from the qualitative analyses are displayed in Table 4. For the first question, which asked about the questions coaches would ask the student-athlete should they follow-up, coaches frequently asked questions about why the student-athlete was transferring. However, this response tended to be more frequent in the no MHI condition (51%) relative to the MHI condition (38%). Coaches also asked about the student-athlete in general and their specific personal characteristics. Additional questions about athletic and academic performance were mentioned by some coaches (20%). The second open-ended question asked coaches about how the student-athlete would contribute to the program. Nearly half of respondents (44%) indicated they required more information to answer the question. One-third of participants (33%) suggested the student-athlete could potentially contribute positively to the team—this response was endorsed relatively equally by those in the MHI condition (30%) and the no MHI condition (34%). However, perceptions that the student-athlete would not contribute to the team were more common in the MHI condition (16%) relative to the no MHI condition (6%). Finally, the third open-ended question asked about how, if at all, coaches obtain

information about student-athletes' mental health status in general. Overall, 52% of coaches indicated they do try to get information on the mental health of a student-athlete during the recruiting process. In the MHI condition, 48% of coaches indicated asking coaches, staff, or parents about mental health status in general. Coaches in both conditions reported similar strategies, including asking previous coaches and people close to the student-athlete about their well-being, directly or indirectly. Indirect ways of obtaining student-athlete mental health information included asking about constructs related to mental health (i.e., stressors, challenges) and observing the student. Only 8% of coaches in each condition mentioned connecting students to mental health resources.

Table 4
Overview of Themes from Open-ended Questions

			% Mentioned	
Theme	**Exemplary Quote**	**Overall**	**Mental Health Issue**	**No Mental Health Issue**
Question: If you follow up with this student-athlete, what questions would you like to ask them? (N = 148 non-missing responses)				
Reasons for transfer	"I'd ask why they are transferring."	46%	38%	51%
Get to know student better	"Describe how you started in the sport and what drives you to continue training, practicing, and competing. Please tell me a few of your goals for the next season." *sic*	28%	32%	25%
Personal character attributes	"I would look into their ability to be a team player, character, academics, and ability to get along with their teammates." *sic*	25%	18%	30%
Athletic performance	"What position, how much playing time they got, why they are transferring"	20%	20%	20%
Academic performance	"Mostly just to see transcripts or test scores."	14%	10%	16%
Mental health history	"Why are you transfering? What issues caused you to look elsewhere? What kind of MHI are you experiencing?"	8%	20%	0%
Question: How would this student-athlete contribute to your program? (N = 147 non-missing responses)				
Need more information	"Depends on how good of a player they are, how much they buy in to our program and culture"	44%	40%	46%

Contribute positively to team culture	"Seems like they are a team player and that's what I look for in my athletes. I want them to benefit the team both athletically and academically as well as the team benefit them"	33%	30%	34%
Would not contribute	"Based on talent identification from former coach the student athlete would not score points."	10%	15%	6%
Role player	"Could be a good training partner for higher level athletes"	10%	7%	11%
Athletic potential	"They may be a point scorer at our conference meet"	8%	7%	9%
Question: During recruiting do you try to get information on the mental health of the student-athlete? If yes, how do you get this information?				
Ask coach, staff, or parents	"Coaches, opposing coaches, teachers, and counselors."	36%	48%	29%
Ask student directly	"Ask the SA [student athlete] about any challenges they have previously faced and how they dealt with those challenges."	28%	20%	31%
Ask about challenges	"Asking questions about what stresses them and how they respond? Talk to their coaches on character, maturity?"	26%	16%	31%
Determine indirectly (i.e., asking indirect questions, observation)	"observation, sharing my own personal MHI and occasionally asking"	13%	16%	12%
Ask about student's family and background	"Ask about their background, what makes them the person they are"	8%	16%	4%
Sharing mental health resources	"Just by talking and informing of all of our resources here."	8%	8%	8%

Note. Percentages vary due to missingness. Percentages do not sum to 100 because comments could mention more than one theme. Themes mentioned by fewer than 5% of respondents are not included.

Discussion

This study explored college coaches' perceptions of prospective student-athletes with MHI. Inconsistent with our expectations, the findings suggest student-athletes with MHI are rated as less problematic and more worthy of scholarship support than those without MHI. Some evidence of stigma was found, as student-athletes

with MHI were rated as less valuable, less likable, less reliable, less trustworthy, and less likely to perform under pressure than those without MHI. Although, these comparisons did not meet conventional thresholds for statistical significance after adjusting for multiple pairwise comparisons.

Our findings regarding potentially poorer judgments of students with MHI are consistent with Goffman's Stigma Theory (1963), suggesting mental health is viewed as a stigma that has negative implications for student-athletes with MHI. Considering the number of young people, college-aged athletes included, who are experiencing MHI, these findings are troubling. Across almost 400 campuses nationwide, 60% of students met the criteria for having at least one mental health problem (Lipson et al., 2022), and another national survey found almost 75% of students reported moderate to severe psychological distress (American College Health Association, 2021). Although college students have previously been hesitant to discuss or disclose mental issues (NCAA, 2019; Velasco, 2017), post-COVID-19 research suggests young people now feel more comfortable sharing their MHI (Cain Miller, 2021; Gallup, 2021). Mental health is widespread, and student-athletes are feeling more open about discussing their MHI; yet, this study provides preliminary evidence that they may be stigmatized for doing so. Increased disclosure, coupled with the mental health stigma demonstrated in our research, suggests a paradox: student-athletes who disclose their MHI could get professional help and valuable support, but it may be at the cost of jeopardizing their value. This is a problem, and one that Hilliard et al. (2022) suggest may be improved by reducing public stigma and self-stigma, specifically through (1) exposing college student-athletes to people who seek mental health support, and (2) increased education for administrators and coaches.

In terms of college athletics, the current results suggest more research is needed to understand how coaches make decisions about student-athletes when they have access to their mental health histories. Such findings align with prior research showing coaches play a critical role in supporting student-athletes as a whole person in and outside of sport (Castaldelli-Maia, 2019). Our study supports the notion that student-athletes may face increased pressure to be, or appear to be, psychologically healthy due to coaches' perceptions just as Bauman et al. (2016) found. Disclosing MHI can lead to perceptions of poorer performance and lower value to the team (Mertz et al., 2022), as well as concerns about the potential negative effects of psychiatric medication on athletic performance (NCAA, 2023a). These factors may create additional stress, pressure, and isolation for student-athletes.

Although some factors, such as medication side effects, are less adaptable, educating coaches offers a tangible and impactful way to reduce stressors and enhance support for student-athletes. The NCAA implemented mental health education modules for coaches (NCAA, 2016), intending to promote mental health help-seeking behaviors; however, the current study results show coaches rarely mention mental health resources when a student-athlete expressed MHI in the recruiting process. Despite low resource sharing, almost half of the coaches tried to get mental health information when the recruit had MHI, using methods such as indirect questions, asking other coaches, asking about challenges, character, and

maturity. These findings are consistent with Eckenrod et al. (2023), suggesting there may be confusion between mental performance and mental health. The combination of negative responses due to mental health stigma in student-athletes, the overlapping identities of mental performance and mental health, and the fear of being viewed as a poor performer add to our understanding of the low percentage of student-athletes who seek mental health support (NCAA, 2023a).

Contrary to our hypothesis, student-athletes with MHI were rated significantly more worthy of scholarship and significantly less problematic. Although these results contradict our initial hypothesis, there are several explanations for why stigma did not manifest in negative assessments of scholarship worthiness and on the problematic scale. These results could be attributed to the increased visibility of high-profile professional athletes with MHI (McDowell, 2021) and ongoing education initiatives on MHI for college coaches (NCAA, 2023b). Increased awareness and education about MHI may mean the stigmatization of scholarship worthiness has improved, with coaches more willing to support athletes with MHI. However, this study only surveys 155 college coaches covering 19 sports (campus count not collected to preserve anonymity). Due to the disparity in mental health funding among universities (Beebe & Petrie 2024), it cannot be assumed destigmatization occurs across the entire NCAA community.

Furthermore, the result of student-athletes with MHI as less problematic is intriguing and can be attributed to social desirability bias (Edwards et al., 1962). This result adds to the credibility of educational programs implemented by the NCAA (NCAA, 2016), suggesting coaches are aware that labeling an athlete as problematic is discriminatory and wrong. Furthermore, disclosing MHI could be perceived as demonstrating responsibility and self-awareness, qualities associated with effective self-management and distinctly different from those attributed to problematic athletes. This perception might lead coaches to believe there are more defined pathways for supporting student-athletes with MHI using mental health resources informed by NCAA education (NCAA, 2016). Conversely, the path may seem less clear for athletes without MHI.

Implications

The current study provides several implications for researchers and practitioners focused on reducing mental health stigma for student-athletes. Although protecting and enhancing student-athlete mental health is a central initiative in the NCAA, this study suggests that additional focus must be given to the unconscious or conscious biases that coaches possess, especially when they are recruiting an athlete with MHI. Reducing mental health stigma should go beyond the addition of resources and advocating disclosure; efforts should aim to include coach education and training on how to interact with a student-athlete with MHI. Ensuring coaches understand the biases they hold when interacting with athletes who disclosed MHI is an important first step to addressing the problem, but more research is needed to curate an effective training program for coaches. Though not exhaustive, topics such as myths about mental health in athletes, conscious and unconscious biases, recruiting, onboarding,

disclosure, and discrimination should be included in coach training. Ultimately, researchers and practitioners alike must design a model where disclosure leads to positive support for student-athletes to help create safe spaces to obtain mental health care without experiencing negative consequences from college coaches.

The current study has important practical implications for training college coaches to help reduce mental health stigma. In this study, we asked college coaches if and how they seek information about student-athletes' mental health during recruitment. Results showed inconsistency in how mental health information is requested, with the most common themes found to be: asking student-athletes directly, reading between the lines, asking the student-athlete's connections (i.e., coaches), and offering professional resources on campus (See Table 4 for more information). It is not clear what questions college coaches are directly asking, and it is problematic that college coaches are reading between the lines by 'observing' and 'getting a feel' for recruits as their method of assessing MHI.

In an effort to increase college coaches' mental health literacy and reduce the stigma surrounding treatment-seeking behavior, the NCAA presented coaches with an online educational module, entitled 'Supporting Student-Athlete Mental Wellness' (NCAA, 2016). Although this module represents an effort in training college coaches, one-fifth of coaches did not find it useful, and stated that it lacked direct guidance on how to, or whether to, address MHI in the recruiting process (Kroshus et al., 2019). This module may be improved by giving college coaches direct guidance on navigating mental health conversations in the recruiting process. Athletic departments should consider how that under the Americans with Disabilities Act (ADA) (U.S. Department of Justice Civil Rights Division, 2024), employers are prohibited from asking questions about MHI during job interviews; companies are monitored by HR to ensure recruiting procedures follow this policy. Evidently, this policy does not apply to college coaches because student-athletes are not currently considered employees; future NCAA education should establish policies to protect student-athletes, just as all employers are protected all around the United States. College coaches and athletic departments should be safe spaces to talk openly about mental health, educate themselves and others, be conscious of language, encourage equality between physical and MHI, show compassion for those with MHI, choose empowerment over shame, and be honest about treatment (Greenstein, 2017). Again, more research is needed on how this information can be implemented into effective training modules with clear take-away strategies for coaches.

Limitations and Future Research

As with any study, there are some limitations to the current research. In particular, there was some ambiguity in the study about whether the mental health issue was recognized by participants. As a manipulation check, we asked college coaches whether the student-athlete recruits in the voicemail transcript had MHI, with the possible responses 'Yes,' 'No,' and 'I do not remember' (see Footnote 1). In the control condition (no MHI cited), many of the participants in the study responded to the manipulation check with 'I do not remember.' They may have been

confused by the manipulation check question and selected 'I do not remember' to account for the possibility that they missed important information. Unfortunately, 29 college coaches in this condition did not pass the manipulation check. Because we think this was not a manipulation check failure but a problematic inclusion of item responses, we opted to include these college coaches in the dataset. The level of detail in the participants' open-ended responses regarding the information received about the student-athlete illustrates the level of attention and effort participants put into reviewing the profiles. To improve this in future studies, this manipulation check should remove the option to answer 'I do not remember' and only allow for the answer options "Yes" and "No".

Furthermore, in the qualitative analysis, we found college coaches wanted more information on the student-athlete than was provided on the voicemail transcript to make a judgment regarding evaluation and follow-up. This suggests the study can be made more realistic by providing a more detailed college coach report. We chose to make the college coach report neutral to avoid extraneous variables affecting the dependent variables. To gain a more accurate understanding of coaches' perceptions of student-athlete recruits, future studies might consider using a more extensive college coach report or a multi-step process that mimics the typical full college athlete recruitment process. Additionally, asking coaches to rank factors they perceive as important may provide valuable insight into the role of MHI in recruiting decisions. Nevertheless, Greenwald et al. (2003) indicates that subjective information can activate implicit biases that influence decision-making. Therefore, by using a voicemail with limited, subjective information, this study seeks to illustrate that mental health biases can impact recruiting decisions. Additionally, this study reflects the decision-making process college coaches may face when recruiting in high volumes with disorganized information (Palomba, 2024). Some athletes in the transfer portal are signed within 48 hours (Tsoukalas & Knowlton, 2024), compelling coaches to base their decisions on subjective information, such as a single voicemail from another coach, rather than undertaking the more time-consuming task of collecting objective data. This study has ecological validity (Schmuckler, 2001) as it replicates the reality that timely transfer portal decisions are sometimes based on subjective information.

The current research focused on the college coach discovering a student-athlete's mental health status by reading it on a voicemail transcript. Future research might also consider different ways in which this information is relayed from a student-athlete to a college coach. For instance, as disclosure of MHI is becoming more accepted and student-athletes are taking a more active stance in reducing mental health stigma, how might coaches view this information when it is received directly from the athlete? Further, the control condition did not explicitly provide mental health information; however, the absence of information does not necessarily mean participants did not believe the college student-athlete had a mental health issue in the control condition. More importantly, there may be many student-athletes who do not acknowledge they have a mental health issue. This is important to understand, particularly as the rate for disclosure is low and not well-understood among student-

athletes. These findings highlight the complexity of mental health in the student-athlete context; there are signs of reduced stigmatization and effective educational initiatives; however, this is only a starting point, and student-athletes still face the risk of stigmatization when engaging in conversation about MHI in the recruiting process.

Conclusion

This research has given us a greater understanding of the impact that disclosing a mental health issue has on a student-athlete's recruitability and value to a coach. Our findings support the presence of mental health stigma in the sporting world, and they expand on the literature by looking more closely at coaches' perceptions of student-athlete mental health. It is essential to use such research to guide future education and training, continue to make strides in promoting the disclosure of MHI, and encourage help-seeking behavior in student-athletes. Moreover, college coaches' negative bias toward student-athletes with MHI may represent a roadblock in destigmatizing mental health in college athletics and prevent student-athletes from seeking help when needed. In conclusion, though there are signs of destigmatization and effective education, it is essential for college coaches to understand high-performing athletes and MHI may coexist and a coach plays an integral role in supporting the mental health and help-seeking behavior of a student-athlete. Student-athletes will continue to be a vulnerable group until they feel they can get help for MHI without jeopardizing their place on a college athletic team.

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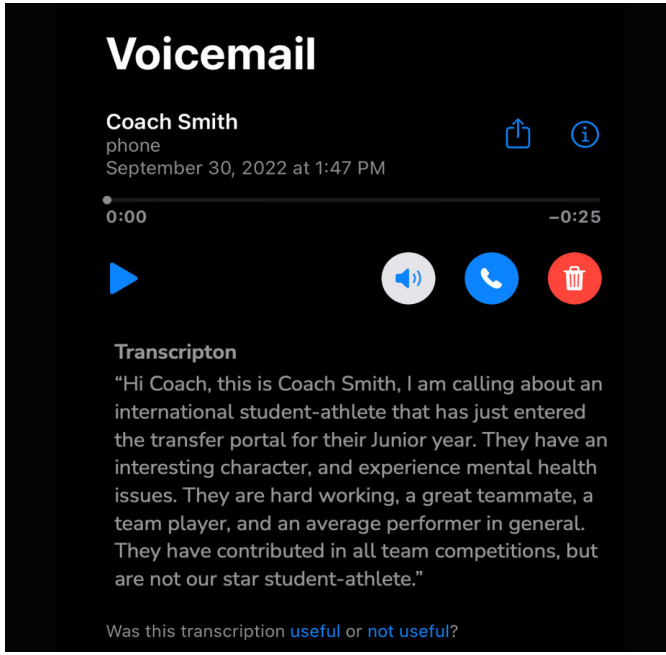
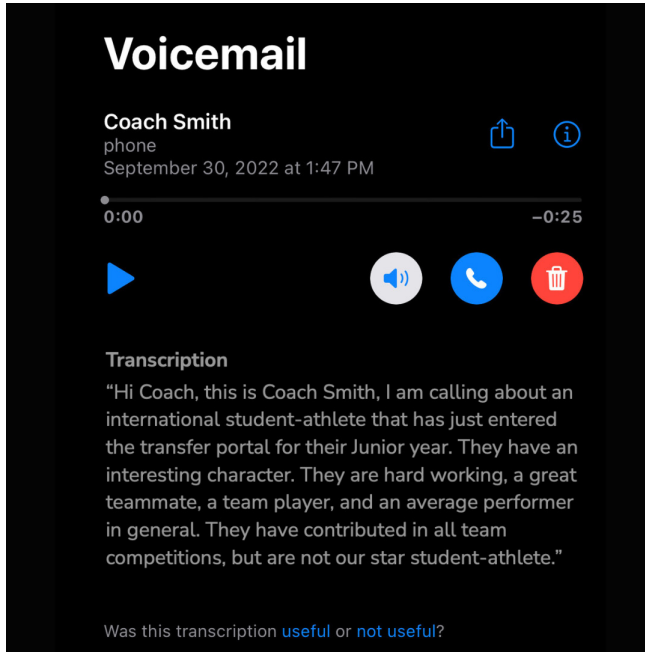
Appendix A

Coaches Report in Screenshot Format

International Student-Athlete, Mental Health Issue Cited

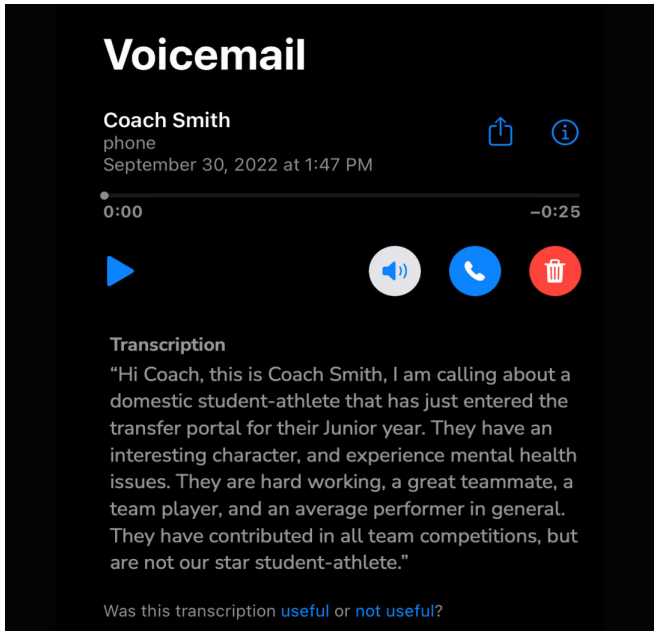


International Student-Athlete, No Mental Health Issue Cited



Domestic Student-Athlete, Mental Health Issue Cited

Domestic Student-Athlete, No Mental Health Issue Cited



Appendix B

Qualtrics Survey: Methods for Recruiting Student-Athletes

Consent Form **Study Title:** Methods for Recruiting Student-Athletes (IRB Protocol Number: IRB-FY2023-68)

Principal Investigator: Dr. Mikki Hebl, 6100 Main St. MS-25 Rice University, Houston, TX 77005, (832)541-3150, hebl@rice.edu; Other Investigator(s): Maria Budin, 6100 Main St. MS-25 Rice University, Houston, TX 77005, mb103@rice.edu, Dillon Stewart, 6100 Main St. MS-25 Rice University, Houston, TX 77005, ds69@rice.edu. This form gives you information about the study, including the purpose of the research and the risks and benefits of participating.

Study Description. This study is part of a senior honors thesis in which you will be asked to make decisions about recruiting an athlete in the transfer portal. The survey will take about 10-12 minutes to complete.

Study Purpose. The purpose of this study is to learn how different student-athlete background factors impact recruiting.

Procedures. Participants will be prompted to a consent page before viewing the survey. They will select they have read and understood the form and consent to this study before beginning the survey. If they select no they will be prompted away from the survey. The research team is using this method for confidentiality. In this study, you will view a voicemail left from a coach concerning one of their athletes in the transfer portal. You will then answer questions in relation to a voicemail shown.

Participant Requirements. You must be at least 18 years of age and must have had (or currently have) some experience as a collegiate-level coach.

Risks. There are no known risks with your participation.

Benefits. There are no personal benefits for participating, but the results may be used to improve recruiting practices in the future.

Compensation & Costs. You will receive a $10 Amazon gift card for your earnest completion of the study.

Ending Your Participation. Your participation in this study is entirely voluntary. You are free to refuse to be in the study at any point in time.

Confidentiality. By participating, you understand and agree that the data and information gathered may be used by Rice University and published and/or disclosed by Rice University to others outside of Rice University. However, your own identity and individual data will not be made public.

Rights. Your participation is voluntary. You are free to stop your participation at any point. Refusal to participate, withdrawing your consent, or discontinuing participation in the study will not result in any penalty or loss of benefits or rights to which you are otherwise entitled; note that you will not be eligible for the $10. The Principal Investigator may remove you from the study for a number of reasons. In such an event, you will not suffer any penalty or loss of benefits or rights; you would get the $10.

Right to Ask Questions & Contact Information. If you have questions regarding the study or have questions about your rights as a research participant, you are free to contact the primary investigator, Dr. Mikki Hebl (hebl@rice.edu) or an IRB administrator at Rice University. Email: irb@rice.edu or Telephone: 713-348-3586

By selecting "I consent (proceed to survey)" below, you agree to participate in this research study and certify that you are at least 18 years old and have collegiate level coaching experience.

- o Yes, I consent. (1)
- o No, I do not consent. (2)

Q1.2 Which of the following jobs have you had in College Athletics? You may select more than one.

- ☐ Head Coach (1)
- ☐ Assistant Coach (2)
- ☐ Volunteer Coach (3)
- ☐ Other (4) _____
- ☐ I have never been a coach (5)

Q2.1 What best describes your gender?

- o Male (1)
- o Female (2)
- o Non-binary (3)
- o Prefer not to say (4)
- o Other (5) _____

Q2.2 What is your race/ethnicity?

- o White (1)
- o Black or African American (2)
- o American Indian or Alaska Native (3)
- o Asian (4)
- o Native Hawaiian or Pacific Islander (5)
- o Hispanic/Latino (6)
- o Other (7) _____

Q2.3 What is your nationality?

_____

Q3.1 I have coached in...

- ☐ NCAA Division I (1)
- ☐ NCAA Division II (2)
- ☐ NCAA Division III (3)
- ☐ NAIA (4)

- NJCAA I (5)
- NJCAA II (6)
- NJCAA III (7)

Q3.2 In what region is your school located?

_____

Q3.3 What sport do/did you coach?

_____

Q3.4 How many years have you worked in College Athletics Coaching in total?

_____

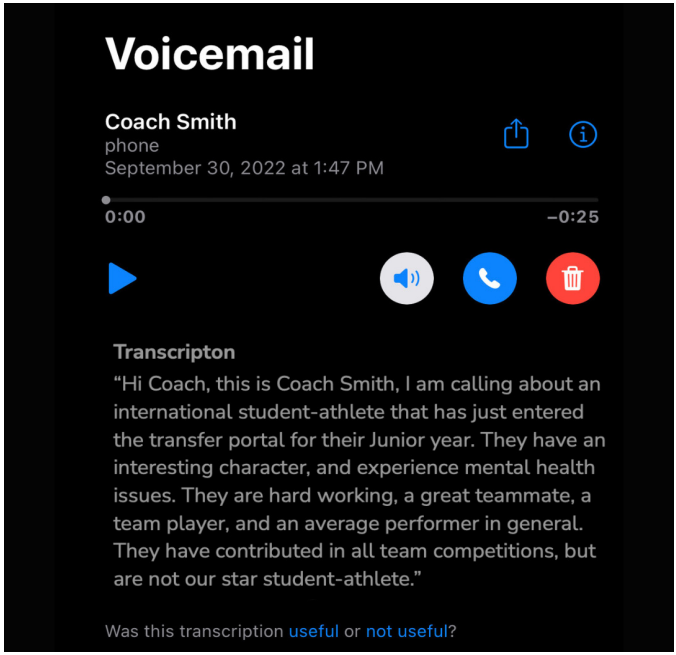
Q3.5 What teams do/did you coach?

- Men's (1)
- Women's (2)
- Both Men's and Women's (3)

Q4 You will now **read** a transcription of a recruiting voicemail. Once you have read the transcription, go to the next section and answer all questions. Click "I understand." to move on to the graphic.

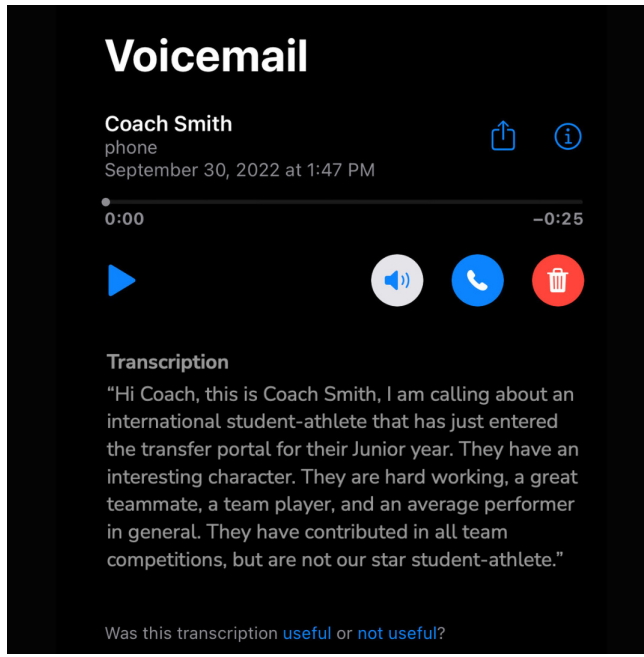
- I understand. (1)

Q5.1 Please read the following voicemail transcription:



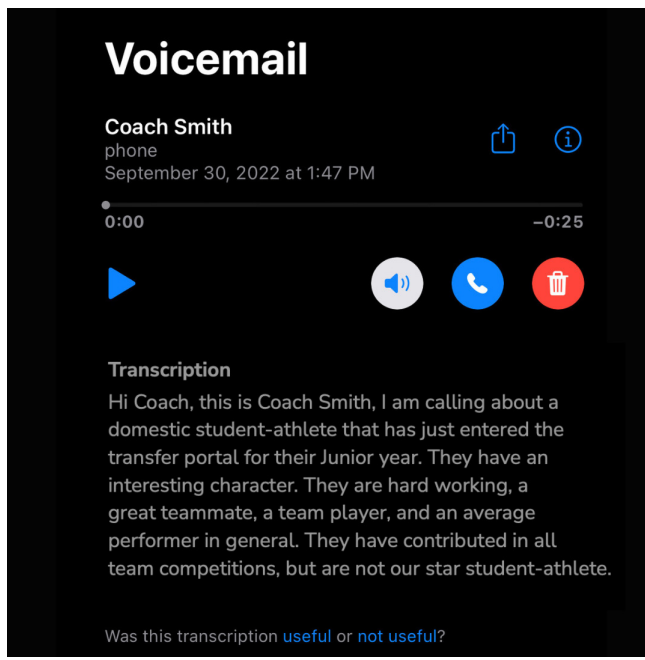
- I have read this graphic. (1)

Q6.1 Please read the following voicemail transcription:



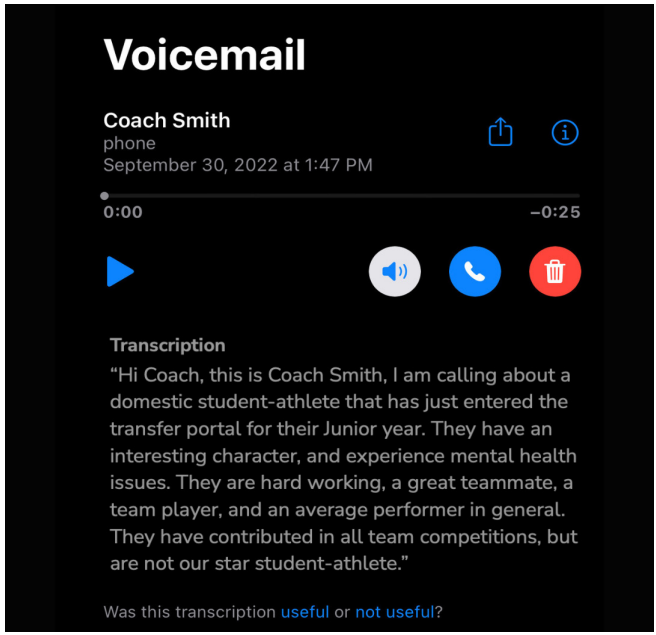
o I have read this graphic. (1)

Q7.1 Please read the following voicemail transcription:



o I have read this graphic. (1)

Q8.1 Please read the following voicemail transcription:



o I have read this graphic. (1)

Q9.1 Would you want to follow up with this student-athlete?

o Yes. (1)

o No. (2)

Q9.3 Indicate the extent to which you agree or disagree with the following statements

	Strongly Disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
This student-athlete would be valuable to your program. (1)	o	o	o	o	o

This student-athlete seems likable. (2)	o	o	o	o	o
This student-athlete seems trustworthy. (3)	o	o	o	o	o
This student-athlete is worthy of continued scholarship support. (4)	o	o	o	o	o
This student-athlete would perform well under pressure. (5)	o	o	o	o	o
This student-athlete seems unreliable. (6)	o	o	o	o	o
This student-athlete seems problematic. (7)	o	o	o	o	o
This student-athlete seems weak. (8)	o	o	o	o	o

Q10.1 If you follow up with this student-athlete, what questions would you like to ask them?

_____

Q10.2 How would this student-athlete contribute to your program?

_____

Q11.2 Have you ever directly connected a student-athlete of yours with mental health resources?

- o Yes (1)
- o No (2)

Q11.3 Have you ever had a student-athlete take a leave of absence due to mental health issues?

- o Yes (1)
- o No (2)

Q11.4 During recruiting do you try to get information on the mental health of the student-athlete?

- o Yes (1)
- o No (2)

Q11.45 If yes, how do you get this information?

_____

Q12.1 Is this student-athlete recruit in the voicemail domestic or international?

- o Domestic (1)
- o International (2)
- o I do not remember (3)

Q12.2 Does this student-athlete recruit in the voicemail have mental health issues?

- o Yes (1)
- o No (2)
- o I do not remember (3)

Q13 Please insert the name and email of any other college coaches you think would be willing to participate in this study.

_____

Q14 Thank you for participating in this study! We hope you enjoyed the experience. Please feel free to ask any questions or to comment on any aspect of the study

JOURNAL OF INTERCOLLEGIATE SPORT

Understanding College Athlete Mental Health: Insights from Division I Athletic Department Personnel

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Throughout contemporary society, mental health and well-being are viewed as critical components of holistic, biopsychosocial development. This perspective has gained momentum within the context of sport, as athletes utilize their social platform to advocate for mental health resources and supports. However, the diverse and dynamic needs of many athletes remain unmet. Within the current study, six focus groups—which included 27 partners of collegiate athletics—were conducted and included athletes, coaches, athletic trainers, as well as athletic administrators and academic counselors. Using a reflexive thematic analysis, findings indicated that college athlete mental health is understood as holistic well-being and the ability to thrive in daily life. Participants discussed learning about mental health through academic education and training, as well as lived experiences (e.g., dual pandemic). Finally, participants believed more athletes are talking about mental health and that athletes feel most comfortable discussing mental health with their teammates and friends, the team's sport staff (e.g., athletic trainers, strength and conditioning coaches, assistant coaches), and mental health professionals. These conversations often occurred in the locker room and on team bus rides. However, there was hesitancy discussing mental health with head coaches and because of gender differences.

Keywords: student athlete, intercollegiate athletics, well-being, interprofessional collaboration, interdisciplinary care

Journal of Intercollegiate Sport, 2025, 18.3

Throughout contemporary society, mental health and well-being are viewed as critical components of holistic, biopsychosocial development. This perspective has gained momentum within the context of sport, as athletes utilize their social platform to advocate for mental health resources and support (Jackson et al., 2022). However, even in an era in which openly discussing mental health is becoming more common, the diverse and dynamic needs of many athletes remain unmet. This service gap is particularly prevalent within collegiate athletics (Kraus & Tibbetts, 2022). For example, related to the COVID-19 pandemic, a report from the National Collegiate Athletic Association (NCAA, 2023) indicated that, two years after the height of the pandemic, rates of anxiety, depression, and mental exhaustion had seen little change. These rates have remained 1.5-to-2 times higher than before the onset of the pandemic. Such realities are especially prominent during the dual pandemic, which refers to the simultaneous crises of COVID-19 and systemic racism, amongst college athletes who identify as members of population(s) that are often marginalized by society, including athletes of color, LGBTQ+ athletes, athletes from families who are economically disadvantaged, and female/women athletes (NCAA, 2022). In turn, some college athletes, specifically Black men (Wilkerson et al., 2022), hold negative perceptions of mental health.

As a result of increased awareness of mental health, there has been an overabundance of *calls*, *stances*, and *consensus statements* for mental health promotion throughout all systems and levels of sport (e.g., Breslin et al., 2019; Henriksen et al., 2020; Poucher et al., 2020; Reardon et al., 2019; Schinke et al., 2018; Vella, 2019). In fact, the NCAA's Sport Science Institute (2024) released their own inter-association consensus document that outlined *mental health best practices*, including: (1) creating healthy environments that support mental health and promote well-being; (2) developing procedures for identification of athletes with mental health symptoms and disorders; (3) creating action plans that outline referral pathways; and (4) ensuring that licensure of providers who provide athlete mental health care.

Before appropriately implementing such policy and programmatic recommendations, research must first understand how those who are involved in collegiate athletics (e.g., athletes, coaches, athletic trainers) conceptualize the dynamic and diverse mental health of college athletes. As a unique population of youth and young people, college athletes face stressors (e.g., pressure to perform) and risk factors (e.g., bodily injury) that often differ from those experienced by their nonathlete peers (Moore & Gummelt, 2018). Although mental health awareness may be rising among college athletes (NCAA, 2022, 2023), there is still much uncertainty about how college athletes and athletics personnel heuristically and pragmatically understand mental health. The purpose of the current study is to understand how collegiate athletics personnel collectively define, come to learn about, and feel about discussing college athlete mental health.

Conceptualizing Mental Health

The conceptualization of mental health has been debated within and across academic disciplines and professional domains (Lundqvist & Andersson, 2021). One

study highlighting the diversity of mental health conceptualizations was conducted by Manwell and colleagues (2015) and included insights from 50 mental health experts from eight countries. Findings indicated that experts were generally dissatisfied with current definitions of mental health and could not reach a consensus on a unified definition.

However, a commonly referenced two-continua mental health framework (Keyes, 2002) proposed that mental health should be viewed on a continuum, with mental health and mental illness serving as the two endpoints (Westerhof & Keyes, 2010). At one end of the continuum is flourishing, characterized by high levels of mental health and the absence of mental illness. At the opposite end is languishing, where an individual experiences low levels of well-being and lacks coping strategies, which may lead to mental illness. Organizations, such as the National Institute of Mental Health, have traditionally focused on mental illnesses and disorders. Collectively referred to as mental illness (i.e., impairments that functionally interfere with at least one major life activity), common mental disorders include generalized anxiety disorder, post-traumatic stress disorder, and obsessive-compulsive disorder. To diagnose mental disorders, licensed mental health professionals use the *Diagnostic and Statistical Manual of Mental Health Disorder, Fifth Edition, Text Revision* (DSM-5-TR). However, criticisms have been raised that, besides focusing on deficits, the DSM reflects cultural imperialism, Euro-centricity, and patriarchal perspectives (Pilgrim, 2014). In fact, research has shown that unconscious biases (Fadus et al., 2020) when using the DSM-5-TR has led to diagnostic disparities related to culture (e.g., misdiagnosis of disorders because of sociocultural differences; Daugherty et al., 2017), race and ethnicity (e.g., higher rates of misdiagnosis in racially minoritized populations; Liang et al., 2017), gender (e.g., over-diagnosis of women with certain conditions; Loomes et al., 2017), and socioeconomic characteristics (e.g., underdiagnosis of individuals from low-income homes and communities; Owens, 2020).

At the other end of the continua, Hernández-Torrano and co-authors (2020) described positive mental health as the *science of well-being* and contested that definitions of mental health have two concepts in common: 1) mental health goes beyond the absence of mental illness; and 2) mental health is viewed through a biopsychosocial perspective. In this way, mental health is recognized as "a dynamic state of internal equilibrium, which enables individuals to use their abilities in harmony with universal values of society" (Galderisi et al., 2015, pp. 231-232). From a pragmatic perspective, mental health refers to one's ability to maintain holistic, biopsychosocial well-being. In alignment with this perspective, new professions (e.g., sport social work) have embraced the use of strengths-based approaches (Beasley et al., 2022c; Newman et al., 2022a; Newman et al., 2022b; Tarr et al., 2023). Within social work literature, strengths-based approaches encompass the belief that: (1) all people have strengths and capacities; (2) people can change; (3) people change and grow through their strengths and capacities; (4) people can restrict other people from noticing their strengths; and (5) people do have expertise to solve the problem (Pulla, 2017). Thus, although mental disorders and mental illnesses are recognized to exist,

the focus of treatment is on promoting positive mental health and holistic, biopsychosocial well-being. In turn, mental health promotion may help to achieve not only positive mental health but also the development of protective (e.g., social support) and mitigation of risk (e.g., performance anxiety) factors.

College Athlete Mental Health

Due to biopsychosocial conceptualizations of mental health, researchers, policymakers, and clinicians acknowledge that mental health is often best addressed from a holistic, interdisciplinary perspective (Kroshus, 2022). For example, within elite sport systems, Purcell et al. (2019) advocated for the need to equip key partners (e.g., coaches, sport medicine, support staff) to better recognize and respond to mental health concerns. Sudano and co-authors (2017) forwarded the notion of an integrated care model within collegiate athletics that includes assessment of mental health, protocols and procedures for referrals, treatment, follow-up, and documentation, as well as service provision coordinated between primary care, athletic medicine, and mental health providers. More specifically, scholars have stressed the need for interprofessional competence and collaboration among providers, including mental performance consulting, clinical psychology, social work, and mental health counseling professionals (Beasley et al., 2022a; McHenry et al., 2022). Newman and co-authors (2019) similarly advocated for interprofessional collaborations between sport social workers and sport psychology professionals. To this end, Pierce and Erickson (2022) proposed the integration of sport performance and holistic athletic development (e.g., mental health) to serve the intersectional identity of athletes.

Empirically, research has supported such holistic and interdisciplinary efforts. Magier and colleagues (2022) indicated that sport social workers not only valued working in interprofessional settings but sought out opportunities to learn from other mental health professionals. Similarly, Beasley and colleagues (2022bc) found that athletic trainers understood their role as distinct from mental health professionals and underscored the importance of appropriate referral practices within interprofessional teams, as well as the need for more specific training in recognizing mental health concerns. In fact, Sudano and Miles (2017) surveyed head athletic trainers at Division I NCAA institutions and found that nearly half of respondents believed better care could be provided if mental health services occurred onsite in the training room. Research has further underscored the importance of developing skills to talk to athletes about mental health when needs arise (Gross et al., 2020). However, research also suggests college athletes have additional barriers to help-seeking (Harris & Maher, 2023), compounded by increased levels of internalized mental health stigma (Beasley & Hoffman, 2023). Such realities are concerning, as nearly one in three college athletes experienced moderate to severe depression/or anxiety (Drew & Matthews, 2019), which is higher than that of the general college student population (Wolanin et al., 2016).

The Current Study

As college athletes continue to advocate for mental health promotion (Mikkilineni et al., 2023), there is a need to better understand how partners across collegiate athletics (i.e., athletes, coaches, athletic trainers, athletic administrators, and academic counselors) conceptualize college athlete mental health (Hong et al., 2018). Indeed, mental health is often misunderstood, both in general and especially within the context of athletics (Beasley et al., 2021). Such a lack of understanding should not come as a surprise, given the variety of ways in which mental health has been conceptualized (Hernández-Torrano et al., 2020; Keyes, 2002). By constructing a shared understanding of college athlete mental health, not only can policy and programmatic recommendations be appropriately implemented, but interprofessional teams can competently provide interdisciplinary care. Ultimately, the purpose of this study was to construct a collective understanding of college athlete mental health.

Method

Context

A NCAA Division I Football Championship Subdivision conference, located in the northeastern region of the United States, served as the context of this study. At the time of the study, the conference was home to nine full-member academic institutions, which included mainly public research universities—three of which operate as the flagship universities of their respective states—apart from one private university. Approximately 3,800 college athletes were included in the more than 130,000 students enrolled across all conference member institutions. These athletes competed across 18 NCAA Division I intercollegiate sports (8 men's, 10 women's), including basketball, lacrosse, soccer, track and field, and volleyball.

Procedures

Targeted participants were identified from registration for the conference's health and safety summit in the summer of 2021. The annual one-day summit features lectures, presentations, and workshops that promote the holistic health and well-being of college athletes and those involved in collegiate athletics. The summit is hosted by a member institution on a rolling basis and is open to all conference personnel, including athletes, coaches, administrators, medical professionals, and academic support staff. These potential participants were individually and directly sent a recruitment email, which contained information about the study, informed consent, and a link to register for the study. Participation in the study was voluntary and no incentives were provided. Upon registering for the study, participants were emailed to schedule in-person or online focus groups (dependent upon their preference). In-person focus groups occurred at the annual summit, while online focus groups were conducted via Zoom during the same time period. All focus groups were coordinated to be role-dependent that only participants with similar roles within collegiate athletics (e.g., athlete, coach, athletic trainer) were included in a single focus

group. All study procedures were approved by a member of the team's Institutional Review Board.

Participants

Following the recommendations of Onwuegbuzie and Collins (2007), a total of six focus groups were conducted. These focus groups included 27 collegiate athletics personnel members, comprised of athletes (n = 2 focus groups), coaches (n = 1 focus group), athletic trainers (AT; n = 1 focus group), as well as athletic administrators and academic counselors (Staff; $\underline{n}$ = 2 focus groups). Individual participants included six athletes, seven coaches, seven athletic trainers, five athletic administrators, and two academic counselors. The majority of participants identified as female (n = 22) and white (n = 22). These participants represented volleyball, basketball, cross country, field hockey, gymnastics, lacrosse, soccer, and track & field. Pseudonyms were assigned to protect participant identities while honoring their individual experiences. The presentation of the demographic data intentionally avoids illustrating the intersectional identity of any individual participant (e.g., Coach Young, female, white, volleyball).

Data Collection

Participants in each focus group were asked a series of five questions centered on specific topics of interest. Topics included defining mental health, mental health awareness, discussing mental health, knowledge about [Conference] mental health initiatives, and suggestions for the future. Two unique yet aligned interview guides were used for athletes and all other collegiate athletics partners. In this way, the interview guides were focused on "athlete mental health" but from a diversity of perspectives. For instance, athletes were asked, "How aware are you about mental health?" whereas other partners were asked, "How aware are you about athlete mental health?" Additional athlete questions included, "Who are you most comfortable discussing mental health concerns within athletics?" and "How would you describe the climate around mental health on your team?" Additional questions for partners included, "Think about a time when you discussed mental health with an athlete. What aspects of the conversations did you find easiest? Please explain." and "How is athlete mental health promoted within your athletic department?" Each focus group lasted between 45 minutes and 65 minutes. Focus group audio was transcribed verbatim via a professional transcription service.

Data Analysis

All focus group data were analyzed together using a reflexive thematic analysis (Braun & Clark, 2019). Initially, two researchers who led the data analysis process, became familiarized with the dataset by listening and relistening to the audio transcriptions, as well as reading and re-reading the transcripts. Initial codes were then generated inductively at both semantic and latent levels. The iterative process of generating initial codes included each researcher independently coding the same two

transcripts to develop an initial coding schema, which they then constructed together. An agreed-upon initial coding schema was then reviewed by another researcher. This final coding schema was then used to guide the coding process of the remaining focus group data, with peer debriefs and reviews occurring throughout.

After the initial codes were inductively generated, the two original researchers (together), inductively organized individual codes into initial themes from collating related codes. Next, within each theme, potential subthemes representing evident patterns within the data were constructed from the collated data. When organizing individual codes to develop potential themes and subthemes, rules that describe core proprieties of each were created to justify the inclusion and/or exclusion of individual codes. These potential themes and subthemes were then reviewed with another researcher, as well as refined through peer debriefing with the full research team. In the end, all themes and subthemes were given a specific name and definition that identifies and describes the essence of their meaning. Within this manuscript, findings are described with vivid quotes from the participants to capture their unique lived experiences, perspectives, and knowledge.

Trustworthiness

To aid in the research process, several strategies were used to enhance the trustworthiness of the study and its resultant interpreted and constructed findings. As an example, bracketing interviews (Tufford & Newman, 2012) were conducted amongst the research team prior to data collection to mitigate the influence of individual assumptions and beliefs on the research process. The research team is comprised of 12 individuals. The composition of the research team was comparable to that of the study participants, who included former and current college athletes, coaches, athletic administrators, academic support staff, and licensed mental health providers from member institutions within the conference. Given the unique positionality of the research team, both individually and collectively, the researchers were tasked with reflecting on their own lived experiences related to college athlete mental health. Specifically, to elicit self-reflexivity, members of the research team served as critical friends (Norris, 1997) throughout the study. In this role, research team members reviewed codes, coding schema, and initial themes to challenge, strengthen, and determine the appropriateness of the data interpretations through the process of peer debriefing. Similarly, through member checking (Tracy, 2013), preliminary findings were also presented to collegiate athletic personnel to elicit critical feedback and provide additional context to the data interpretations.

Results

Findings from focus groups are presented in four unique themes related to college athlete mental health: (1) defining mental health, (2) learning about mental health, (3) comfort, and (4) discomfort discussing mental health. This table is included in Table 1.

Table 1.
Understanding College Athlete Mental Health

Theme	Subtheme
Defining Mental Health	Holistic Well-Being
	Thriving in Daily Life
Learning About Mental Health	Academic Education and Training
	Lived Experiences
	Dual Pandemic
Comfort Discussing Mental Health	More Athletes Are Talking
	Teammates and Friends
	Locker Room and Team Bus Rides
	Team's Sport Staff
	Mental Health Professionals
Discomfort Discussing Mental Health	Hesitancy with the Head Coach
	Gender Differences

Defining Mental Health

Throughout the focus groups, participants described how they conceptualized and ultimately defined mental health. Among these understandings, two unique subthemes were constructed from the data: *holistic well-being* and *thriving in daily life.* In general, participants described mental health as an omnipresent component of an athlete's overall health, which must be made a priority in their day-to-day life both on and off the field.

Holistic Well-Being

Collegiate athletics partners conveyed that mental health is holistic, in that mental health embodies all facets of an athlete's (or anyone's) self and social identity. Athlete Lane explained, mental health is "just kind of how you're doing and how you're feeling, and how that translates to your productivity and your overall state." Staff Wilson added, "Mental health is just one of the major aspects that we need in line with our whole being…even if that's getting up and going to the grocery store, everything needs to be in some type of balance." However, participants also cautioned that mental health may be embodied differently from person to person,

even when individuals share other similar characteristics. As Staff Davis stated, "I would define [mental health] as how a person views their own well-being." In other words, although mental health is a component of one's whole-self, mental health is also unique to everyone.

Thriving in Daily Life

Due to the holistic nature of mental health, participants also recognized how mental health permeates throughout one's daily lives. In other words, mental health can have a transformative effect on all aspects of an athlete's life, including athletic performance, academic achievement, personal relationships, and daily activities. Staff Williams further explained:

> Mental health is a person's ability to live their day-to-day life, confidently or just feeling good about themselves, and just being able to go on and live their life without any mental limitations. They're able to carry on everyday tasks or things they enjoy, like sport, without having any of those limitations. That is, mental health is not just about sustained functioning, but it is truly about the ability to thrive in all aspects of life. As Athlete Taylor stated, "Mental health [is] taking care of your mental being and taking consideration on how you feel and what your thoughts are, your thought process, and how that impacts your day-to-day activity." Thus, mental health is not a singular issue, but rather something that impacts every part of an athlete's day-to-day life.

Learning About Mental Health

Participants described a variety of ways in which they learned about mental health, which resulted in three unique subthemes. For instance, participants discussed learning about mental health throughout their academic education and training. Additionally, participants shared lived experiences from their own lives and from their peers as pivotal learning moments. Finally, the Dual Pandemic provided critical insights related to mental health.

Academic Education and Training

Due, in part, to the variety of collaborative roles within collegiate athletics, many types of educational backgrounds were described. Among athletes, participants indicated that they had received fundamental mental health literacy during primary school. Conversely, coaches discussed being exposed to discussions about mental health later in life, as a component of coach education programs and coach development systems. Coach Smith explained, "We've had different coursework where you can do a one- to two-day workshop and learn more about mental health and the signs, and just how to communicate with our student-athletes about it." Aligning with continued education, athletic trainers discussed receiving mental health training as a part of their professional training. Athletic trainers, for instance, spoke about how they were given different opportunities to become mental health experts in their own way. AT Evans explained:

> We do a voluntary training each year with our campus counseling center and that's mainly to make sure my staff is prepared for a situation that we're all put in every day with being first responders and being the closest ones to the athletes sometimes.

The athletic trainers described themselves as first responders within the collegiate sport system, which encouraged them to place precedence on the importance of mental health. However, regardless of their role, participants expressed the need for continued education, particularly as mental health continues to be more openly expressed and discussed.

Lived Experiences

Participants talked about their own experiences and the lessons learned from their peers and colleagues. College athletes explained how, culminating with being a student, the pressure to train and perform led to a general awareness about mental health. Athlete Taylor shared:

> I think mental health affects a lot of student-athletes because they're doing school, sports, and they have a job, and a lot of that stress that comes from just being an athlete in their sport. You're trying to reach these expectations that you set for yourself or your coaches, and that can affect your mental health, and then you're not performing well.

Participants also learned about mental health due to the experiences they witnessed from peers. In fact, recognizing mental health concerns and issues in others, at times, contributed to their awareness more than within their own lives. For example, Athlete Ford explained:

> I definitely notice it at times, but it wouldn't be something that I'd say for myself I'm thinking about super consistently. But I do feel like we all are just really receptive to how our teammates are feeling. And being around them so often and seeing their demeanor in the locker room versus on the field versus in the classroom. I think it's more apparent from the outside perspective watching that than analyzing myself. And it's easier to not think about myself.

However, other participants shared what they have experienced while working closely with college athletes on a day-to-day basis. Because of this closeness, these participants encountered situations that helped them become more knowledgeable about mental health and ultimately how to help. For example, AT Waters shared:

> As an athletic trainer, athletes come to you, you see them every day, you interact them, you chitchat with them, you hear about their families, everything. So, then they get to feel really comfortable with you, so then they come to you with all of these things, and you just get thrown into it. You just get presented with, "Hey, I'm not doing well," or "Hey, I'm suicidal," or whatever it may be. So, you just get invested in that and then you look into it as best you can and try to figure out how you can handle it and do what's best..

Regardless, experiencing and/or witnessing mental health concerns and issues in real-life applications led to a greater awareness of and knowledge about mental health.

Dual Pandemic

Participants agreed that the COVID-19 pandemic and Black Lives Matter movement shaped their understanding of mental health. Due to government lockdowns and experiences of social isolation, many people were kept away from their support systems and safe spaces, including sports, for significant amounts of time. Athlete Moore shared:

> Our coaches haven't really been prioritizing mental health as much as they probably should have, especially with the COVID season when we were having so many games. At one point we had eight games in nine days, and it was just a lot more than what any one of us had expected.

Moreover, participants discussed the impact of the co-occurring racial justice movement and its effect on mental health. Athlete Taylor described their experience:

> With the pandemic and the Black Lives Matter movement taking its height in June, I think people were definitely self-reflecting about their own mental health, and then also how it affects their friends and family. Being in quarantine is definitely different because we lost our sport and I think because all of these different events were happening and people were talking about it, it's almost in your face and you're forced to confront your emotions and thoughts and be alone with them.

Although the pandemic had substantial negative impacts on mental health, the technological innovations used during COVID may have also increased mental health awareness in a different way. Specifically, the explosion of telecommunication (e.g., Zoom) helped to facilitate meaningful conversations. Staff Greene explained:

> I almost feel like I saw students that wouldn't open up in person but would when the screen was there. They felt more okay with opening up about things, and I don't know if it's a feeling that because the bodies are not right there it's safer to say something out loud versus in person.

Shared stressors provided necessary opportunities to engage in open discussions about mental health. As such, the dual pandemic forced participants to not only reflect on their experiences but also provided opportunities for others to further learn about the importance of mental health.

Comfort Discussing Mental Health

Findings suggest that more athletes are talking about their mental health concerns, needs, and experiences, which has fostered a culture of trust and openness for discussing mental health. Moreover, there was a common belief that athletes felt safe discussing their mental health with their teammates and friends and that these conversations often occurred in the locker room and on team bus rides to competitions. However, in addition to peers, participants discussed the importance of the team's sport staff, as well as mental health professionals.

More Athletes Are Talking

Participants discussed the changing climate around mental health, specifically within the culture of competitive athletics. Specifically, participants talked about how professional athletes are helping to lead the way in bringing transparency to this critical topic. Furthermore, Coach Young highlighted one example:

> The idea that all of a sudden, because Naomi Osaka said, "Press conferences are stressful and that's hurting my mental health," now there's players coming out that have said, "Yeah, that's actually true. That actually has been bad for my mental health this whole time, and I didn't recognize it." Just because someone else said it, it brings it to the forefront. I think we talk about representation mattering in so many other things, but we never recognized how much it mattered to breaking this stigma of mental health.

Staff Jones also provided the example of Michael Phelps and said,

> "He had a spotlight on him and his story. I think as more of these athletes continue to open up about their stories it's like a welcome to 'it's okay to not be okay.'" Staff Wilson added, "If Simone Biles can make a lot of money by not competing, but by saying, 'I need to take care of myself,' what does this mean for all these other young adults?" They went on, "In other words, does this mean our student-athletes will follow Biles' example and feel okay putting their mental health above their sport after seeing her do it?" This paradigm shift does seem to be occurring within collegiate athletics. In fact, as Athlete Lane shared, "In my three years on my team, I've seen a positive trend for it being a lot more acceptable to talk about, and I'd love to see it continuing to go that way."

Teammates and Friends

Collegiate athletics partners—including athletes themselves—shared athletes often confided in their teammates and friends. For example, Athlete Moore stated, "Mostly I find that my teammates and I talk about our struggles that we're having since we're all close and we're all going through the college experience and our sport and everything. It [being a college athlete] can be really taxing." Coaches and others involved in collegiate athletics, however, were also privy to conversations that teammates would have with each other about how they were feeling. Coach Johnson shared:

> I think our student-athletes addressing it with their peers is a big deal. I think sometimes things don't get to our level because we have a group that helps teach or that helps address this stuff within their group. If [the team] know what the resources are, they can guide their peers without having to come to coach, because sometimes there's a stigma attached to coming to coach.

Whatever circumstances may lead athletes to seek help from their teammates and close friends, participants agreed that it was due to the comfortability of having these conversations with someone that they know they can trust and may be going through something similar.

Locker Room and Team Bus Rides

Athletes were believed to talk about their mental health in the locker room and on team bus rides. Athlete Carter described their locker room culture, "When we're getting ready for practice or finishing a practice or lift, we're in the locker room and people will just talk about it with whoever. It doesn't matter who's in there." Moreover, some teams even embraced a systematic approach to discussing their mental health. Athlete Taylor explained, "Our team decided to do this thing in the locker room where we have a chart of 'How Are You Feeling Today?' You can tell everyone that you're okay, good, doing great, or not so great." In addition to the locker room, participants shared the value of team bus rides to and from competitions as a space for open conversation. Staff Jones explained:

> After a bad game, a student-athlete might not want to talk to their coach, but I know our strength and conditioning folks hear a lot of those conversations of what's really going on sitting in the back of the bus.

Locker room and bus rides served as safe spaces for athletes to discuss their mental health needs and concerns. These spaces not only provide organic openings for critical discussions to occur, but they also can serve as strategic opportunities for teammates to check-in with each other.

Team's Sports Staff

In addition to peers, participants described a team's sport staff (outside of the head coach) as being important social agents for athletes to discuss mental health. A team's sport staff often includes athletic trainers, strength and conditioning coaches, and assistant coaches. Specifically, participants believed that athletic trainers are often one of the first choices for athletes to confide in or reach out to if they want to seek professional help. Staff Greene explained:

> I think on our campus our trainers get a lot. They hear a lot. They have the conversations. I have one team that I work with where the assistant coach is more hands on with a particular group of athletes because there is history there if they recruited them, but I think overall the trainers is where I'm always being sent. "Go check with this person. Go check with that person, see if they know anything." And I think I've yet to have a "No, they didn't know anything was going on."

In fact, as Staff Williams stated, "Everything goes through the [athletic] trainers." Athletic trainers tend to work in close vicinity and quite extensively with athletes. Given the nature of their role in sports medicine, they are often on the front lines in terms of responding to all health-related needs of athletes, including but not limited to mental health. AT Thomas also shared:

> One of the things that keeps me in athletic training is the relationship that you have with your athlete. As far as I've seen, there's no other job that you get that kind of level of trust in a relationship with the people you work with. And so, I think when you're trusted that way, there comes that responsibility that they'll bring stuff to you that they won't bring to their friends, or they won't bring to their coaches.

However, athletic trainers were not the only group recognized as being helpful. For instance, Athlete Moore shared a story about one of their strength and conditioning coaches:

> We had showed up to lift and it was 6:30 in the morning, and all of us were just exhausted physically, but also mentally…He had finally gotten to the bottom of it and our mental health was a big part of the reason why. He had a talk with us the next day and he was apologizing because he never fully realized how much mental health actually affects student-athletes. Since then, he's always asking about our mental health and if we need anything, and he's very open if we do.

Overall, participants acknowledge that because a team's sport staff, particularly athletic trainers, work closely with athletes, it is common to be privy to conversations about mental health and intervene and/or refer when necessary.

Mental Health Professionals

Outside of peers and team sport staff, participants identified mental health professionals as people with whom athletes felt comfortable discussing their mental health. Although each university employed their own integrated care model (e.g., embedded within the athletic department, centralized at the university, community partnership), most athletic departments had access to a licensed psychology professional, sport social worker, and/or counselor. To this end, participants described the importance of working with a mental health professional who could understand their unique lived experiences, particularly related to their racial and cultural identity(s). For instance, Athlete Parker explained:

> He [the mental health professional] is like a white male; so, I was going to say that might turn a lot of people away. Like I said, he's a super cool dude, he's really funny, he played football when he was in college, so he does have that better understanding.

Athlete Ford immediately followed up and shared, "I think having a professional that understands from a personal experience level, not just reading about it and trying to sympathize, but being able to empathize with the person you're talking to makes the world of difference to me." They explained:

> I think anything that can kind of lower the barriers of difference makes it a lot easier to be willing to be open and honest with who you're talking to. I think having somebody that kind of mirrors you or you can just kind of see yourself in them a little bit makes a huge difference in making that first step easier.

Further, athletes may be more open to seeking help from a mental health professional if teammates or friends expressed having a good experience. AT Martin explained:

> A few guys within my team that are pretty vocal that have had really good experiences at our counseling service center. And that I think has turned into if they're open to talking about it, that word of mouth and it being a positive experience has really helped be like, "You can go over there, and no one has to know that you're being seen there, but I had a really good

> experience with it." I think that matters a lot within our athletes, so it takes one person having maybe a bad experience or a great experience to really turn it around.

In the end, working with a trained mental health professional was viewed as highly beneficial. Although the model of integrated care may differ from university to university and the professional discipline of the mental health professional may vary, there was a belief that working with someone who "mirrors you" (e.g., racially, culturally) provides an important level of comfort for athletes when discussing their mental health.

Discomfort Discussing Mental Health

Although there seems to be openness in talking about mental health among athletes, participants also discussed several ongoing issues that may prevent college athletes from openly discussing their mental health. Specifically, participants suggested hesitancy with the head coach and gender differences as barriers to talking about mental health.

Hesitancy with the Head Coach

Participants noted differences between head coaches and assistant coaches regarding their openness to discussing athlete mental health (with athletes themselves). There was a shared sentiment that many head coaches are not aware of mental health needs and concerns, either unintentionally or intentionally. AT Martin explained:

> Some of them are either in denial about it or they're so scared to do the wrong thing that we've had coaches who don't want to be educated. I think there's a fear there that they're going to be blamed if something were to go wrong.

Several athletes also explained that they believed their head coach focused on winning above and beyond anything else and, in turn, expressed perceived fear of losing playing time. In fact, Coach Johnson acknowledged, "Sometimes there's a stigma attached to coming to coach. I can hold scholarship and playing time and all of the other things over their head." Coach Avery expanded:

> I think they think what they say to us will be held against them. Like playing time or "Are they going to treat me differently? Are they going to ignore me now? Am I weaker? Am I being judged by them?" They want you to have this idea of them that you had when you recruited them and what they can do, and now you see that they have certain things going on mentally, physically, and emotionally. Is that going to change your perspective of them as an athlete and then as a person? They want to seem tough, and they want to seem strong and like nothing's wrong.

However, as Coach Avery explained, "If they only knew all the stuff that goes on in our lives, but they see us as coaches. They don't see us as people until they graduate or they've been through the system." In other words, coaches are people too. Although coaches may be responsible for determining playing time and have a

focus on winning, many coaches are also cognizant of the mental health issues and concerns that may arise for athletes.

Gender Differences

Although there have been greater strides to improve the conversations surrounding mental health, gender norms and expectations continue to be a barrier. Athlete Ford explained:

> I feel like a lot of females are more accepting towards the idea of mental health. And a lot of the guys just shut it down completely. I think there's something stopping the guys from receiving that kind of help.

Participants also addressed that there is not only a difference in the way men and women talk (or do not talk) about mental health, but also in how they think about mental health in general. Coach Young explained:

> Across gender lines, obviously the stigma is different. I think we'd be remiss to think that, as a female, I think about mental health the same way a male would think about mental health…or even too as a white person, or as a straight person. All of that is different. I think that, just in everything that we've been talking about being socially aware of our surroundings, mental health fits into that box, and so does the stigma.

Ultimately, Athlete Lane purported, "I think so much about how little it's talked about on the male teams at my campus, honestly." However, they added, "I just think it's super dependent on how it's talked about and what kind of culture the coaches foster." Although there may be differences between men's and women's teams in their openness to discussing mental health, this gap may be further exacerbated (or improved) depending on the culture of the team and coach.

Discussion

The purpose of this study was to explore how partners throughout collegiate athletics (i.e., athletes, coaches, athletic trainers, athletic administrators, academic counselors) conceptualize the mental health of college athletes. Historically, mental health has been defined from an individualized medical model, focused on symptoms, diagnoses, and individual treatment (Pilgrim, 2014). However, with broader cultural shifts, mental health in sport is now being conceptualized from a holistic, biopsychosocial perspective (Kroshus, 2022). This shift in the understanding of mental health has also led to an increased call for interprofessional collaborations and interdisciplinary care to meet the holistic dynamic and diverse needs of college athletes (e.g., Antle et al., 2021; Beasley et al., 2022c). In support of interdisciplinary care (e.g., Beasley et al., 2022a; McHenry et al., 2022), findings from the current study provide empirical support that multiple collegiate athletics partners define mental health from holistic, biopsychosocial and systems perspectives. Ultimately, such findings may provide novel insights in the future development of a theoretical understanding of college athlete mental health.

More specifically, participants conceptualized college athlete mental health as encompassing individual, organizational, and cultural influences (Barkley et al., 2018). At the individual level, there was recognition across participant groups that mental health needs to address an athlete's "whole being." From a care perspective, this was demonstrated by participants emphasizing a team's sport staff efforts in developing personal relationships with athletes, as well as mental health professionals who understand athletic identity and their unique lived experiences. Teammates, too, should be leveraged when providing support for athletes experiencing mental health needs. Indeed, teammates are uniquely positioned throughout each other's lives and may be able to help identify early warning signs. At the organizational level, participants identified the need for educational training and access to mental health resources and mental health professionals. Prior research, however, has suggested that educational trainings, such as mental health literacy, may not be effective in increasing the knowledge of coaches (Beasley et al., 2024b). Regardless, findings from the current study suggest mental health care be integrated into organizational policy (e.g., gender-inclusive policies) and hiring practices (e.g., sport social workers with clinical licensure). Finally, participants also discussed how culture needs to be considered when conceptualizing mental health. Specifically, participants spoke to the impact of the "dual pandemic" and hegemonic masculinity (i.e., gender norms; Robinson et al., 2024) as influences on athlete mental health. Indeed, effects of the dual pandemic (i.e., COVID-19 and systemic racism) on mental health has documented among collegiate athletes (Newman et al., 2023). However, participants discussed how cultural shifts have increased the number of well-known athletes speaking about mental health, which may lead to more college athletes being open about their own mental health and increase their willingness to seek help.

Conversely, findings from this study also underscore unique risk factors and stressors that may lead to poor mental health among college athletes. At the individual level, gender norms and expectations continue to act as barriers for discussions about mental health. Specifically, female athletes reported being more receptive to mental health conversations, whereas male athletes often resist or shut them down. From an intersectional lens (Crenshaw, 1989), athletes of color were confronted also with racism and marginalization, which further exacerbated mental health concerns. Additionally, participants noted a hesitancy to share mental health concerns with coaches and invoked a preference for sharing such information with sports-science specialists (e.g., athletic trainers and strength conditioning coaches). In all, the culture within individual teams and athletic programs influences whether mental health is openly discussed or avoided. Perhaps one notable immediate action coaches can do is in the example shared by a strength and conditioning coach, wherein the coach responded to the atmosphere of the athletes and intervened by ending practice and creating an environment for athletes to discuss their mental health, like best practices suggested by Bissett and Tamminen (2020). Similarly, the priority of winning should not be emphasized when addressing mental health concerns of athletes. Further, as emphasized by the dual pandemic (Newman et al., 2023), collegiate athletics partners may also need to be aware of current social issues and should create opportunities for

meaningful dialogue with athletes. This study highlights the importance of coaches and the need to remain accessible for the mental health needs of college athletes.

Implications

Moving forward, educational initiatives should be put in place so that every athletic department member who works with athletes understands each other's role and has knowledge of clear referral policies (Beasley et al., 2022c). In fact, an important component of effective interdisciplinary care is the integration of routine screening and early intervention protocols within college and university settings through collaborations between college and university departments of athletics and health and mental health care providers, which is also key to effective (Reardon et al., 2019). In understanding college athlete mental health from a systems perspective, athletics support staff, as well as administrative staff, are imperative to establishing an organizational culture that prioritizes holistic care of athletes (Beasley et al., 2024a). To support such efforts, study findings lend credence to the development of educational resources for the conference office and athletic departments as they progress forward with meeting the dynamic mental health needs of athletes. In other words, mental health education and training should be offered to all members of the athletic department, not only to those who may be working daily with athletes.

There is also a clear need for continuous and easily accessible mental health services for athletes (Harris & Maher, 2023). At the organizational level, university policies could be enacted to allow athletes to maintain mental health services throughout the year, regardless of university breaks and holidays. Key collegiate athletics partners may also consider advocating and lobbying for policies, including the social work licensure compact that ensures college athletes the ability to maintain continuous care, particularly when traveling for competitions and/or when the university is not in session (e.g., winter break). Additionally, conference offices, athletic departments, and universities should reconsider how they engage athletes through awareness-raising campaigns. Participants also highlighted meaningful approaches, such as messages from current athletes and coaches via social media platforms and in-person events.

Limitations

Although a variety of collegiate athletics partners were engaged, several notable vested partners were not represented, namely mental health professionals. Given the training and education of mental health professionals, this study sought to understand college athlete mental health from perspectives of those not directly involved in providing such services. However, with the increased calls for interprofessional teams and interdisciplinary care, understanding how licensed psychologists, sport social workers, counselors, sport psychology professionals, and certified mental performance consultants can competently engage in interprofessional collaboration to support athlete mental health should be a priority.

Within this study, the majority of participants identified as being white and/or a female. Given the study's findings related to gender differences and importance

of lived experiences, particularly regarding race and racism, future research must strive to understand how intersectional identity and unique lived experiences (e.g., international college athletes) may influence conceptualizations of mental health, comfortability discussing mental health, and engagement in help-seeking behaviors. Future, research should also consider engaging a larger number of participants per focus group, as some research has proposed focus groups be conducted with six to 12 participants each (Onwuegbuzie & Collins 2007). Finally, it should be noted that this study was conducted within a single athletic conference, in which football programs do not compete as members of the conference. Football is uniquely positioned within collegiate athletics, both financially and socially; thus, the exclusion of football personnel limits the breadth of the findings. Future research should also engage a broader spectrum of athletic conferences (and their collegiate athletics partners) and investigate how unique geographic sociopolitical climates may influence how college athlete mental health is understood.

Conclusion

The results of this study support an interdisciplinary care model to address college athlete mental health. Specifically, athletic departments can follow best practices outlined in conceptual literature (e.g., Beasley et al., 2022a; McHenry et al., 2022) to establish interprofessional teams. For effective interdisciplinary care, research in and outside of sport settings points to clear role clarification and knowledge of each professional's role (e.g., Antle et al., 2021; Beasley et al., 2021). Additionally, although participants recognized a variety of available mental health resources, participants highlighted the need to streamline the many resources so that they are easier to consume and navigate, particularly in high-stress times. This suggests that athletic departments need to develop clear referral policies, so that each member of the interdisciplinary care team knows appropriate referral procedures (NCAA Sport Science Institute, 2024). In the end, findings from this study support the operationalization of college athlete mental health as being inclusive of holistic, biopsychosocial well-being and conceptualized from a systems perspective (individual, organizational, and cultural). Regardless of their role within the athletic department, participants recognized that the environments fostered within collegiate athletics are an important aspect of college athlete mental health and must be considered when care is provided to athletes. Ultimately, to adequately support college athlete mental health, a shared understanding of holistic well-being and the ability to thrive in daily life are necessary.

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JOURNAL OF INTERCOLLEGIATE SPORT

The Athletic Reckoning: A Study of Former College Athletes' Identity, Realization, and Career Preparation

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Athletic identity, as scholars have demonstrated, shapes the perceptions and experiences of college athletes. Likewise, scholars have also shown that career preparation (or the lack thereof) is an important component of athletes' general preparation for life after sport. This study focuses on former college athletes' perception of how their athletic identity and commitment to their athletic role shaped their career preparedness. It does so by interviewing former college athletes who have had the requisite time to reflect on their career preparedness, and by considering what the authors call 'the athletic reckoning.' This is the juncture at which participants come to the realization that their athletic career is over and, often correspondingly, take on a heightened focus regarding their vocational development. Findings also shed light on the job market experiences of unprepared athletes. The study has implications for both scholars of intercollegiate sport and for practitioners in athletic departments who work with current and former college athletes.

Keywords: athletic identity, career preparedness, college athletes, athletic reckoning

Given the scale and complexity of college athletics, a thorough appreciation of the college athlete experience is necessary. Furthermore, since college has both a profound and prolonged effect on the trajectory of attendees' lives, it is important to consider the implications of their experiences (Cairó & Cajner, 2018; Stambulova et al., 2009). Athletes' collegiate experiences differ from those of the general student body due to the intensive nature of college sport participation (Paule-Koba & Farr, 2013). Athletes compete on college sport teams that are permitted 20 hours of practice per week during the season, and no more than eight hours of practice per

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week in their sport's off-season (NCAA, 2024). Hour limits are necessary to ensure athletes have enough time for their academic responsibilities. In reality, however, athletes often spend more time in the sport environment than rules permit (Ayers et al., 2012). Therefore, athletes can find balancing sport participation with academics challenging (Hextrum, 2020; Navarro & McCormick, 2017).

College athletes' career preparation may not only be inhibited by time constraints, but also by the norms of their sport subcultures which often emphasize a prioritization of sport over academics (Coakley, 2021; Rubin & Moses, 2017). An intense dedication to sport, however, can affect athletes' future. Individuals' intense dedication to sport is associated with identity foreclosure and strong athletic identity development, whereby individuals identify exclusively with their athletic role (Brewer et al., 2017). Strong athletic identities are linked to diminished academic identity, in which individuals' athletic role eclipses their academic role (Brown et al., 2000). This can be concerning, as athletes with diminished academic identities are less inclined to explore vocational development and are more likely to experience a turbulent transition out of sport (Kidd et al., 2018; Petitpas & France, 2010; Stokowski et al., 2019).

Athletes' management of their athletic and academic roles, as well as their preparation for life after college sport has garnered considerable attention (Park et al., 2013). Despite this, college athletes continue to feel unprepared for life after sport, as recent studies have demonstrated (e.g., Bopp et al., 2024; Harry & Hammit, 2024). The lack of resolution in addressing athletes' preparedness underscores the need for further investigation. Furthermore, the extant literature focuses more broadly on college athletes' preparations for life after sport (e.g., Lally, 2007; Lavelle & Robinson, 2007; McKnight et al., 2009; Paule-Koba & Farr, 2013; Stokowski et al., 2019; Zvosec et al., 2023). This restricts the depth with which each aspect of preparing for life after sport can be explored (e.g., diet, exercise, psychological, social, wellness). While numerous studies have examined athletes' preparedness, fewer have explored specific components of athletes' career preparation in-depth.

Athletes' career preparation is crucial, as some athletes transition directly from college into the workforce (Stokowski et al., 2019). Studies on college athletes' career preparedness or related concepts (e.g., career maturity, career readiness, career development), have primarily used quantitative approaches to examine current college athletes (e.g., Davis et al., 2022; Houle & Kluck, 2015; Linnemeyer & Brown, 2010; Parietti et al., 2016; Van Raalte et al., 2017). The quantitative study of college athletes' career preparedness is necessary, but insufficient. Quantitative inquiry can identify relationships between the athletic role and career preparedness but cannot explain how or why. Qualitative methodology can. Examining in-depth the experiences of former college athletes can also make a telling contribution. Former athletes know precisely how prepared they were as they have tested it. Current athletes can only share how prepared they think they are. Former athletes who were well-prepared for their careers can share insights into their preparation process, while those who were less prepared can explain the reasons behind it. This will provide a clear illustration of what college athletes can do to improve their career preparedness.

Therefore, the purpose of the current study was to examine former college athletes' perceptions of how their athletic identity and commitment to their athletic role shaped their career preparedness. To meet the purpose of the study the following research question guided the study:

> **RQ1:** How do former college athletes believe their athletic identity and commitment to their athletic role influenced their career preparedness?

Literature Review and Conceptual Frameworks

The study was guided by the conceptual frameworks of athletic identity (Brewer et al., 1993; Brewer & Petitpas, 2017) and career preparedness (Marciniak et al., 2022). Athletic identity has been broadly used in the college athlete literature to ascertain the importance of sport in individuals' lives. In their recent review of the career preparedness literature, Marciniak and co-authors (2022) proposed an organizing framework to consolidate the fragmented body of career preparedness research into a unified conceptual framework.

Athletic Identity

Originating in the fields of psychology and sociology, and used extensively in the college athlete literature (e.g., Huml et al., 2018; Newton et al., 2020), athletic identity is conceptualized by Brewer et al (1993) as "the degree to which an individual identifies with the athletic role" (p. 237). Established and developed in the form of a survey instrument (Athletic Identity Measurement Scale, AIMS; Brewer et al., 1993), the concept of athletic identity has also informed numerous qualitative works (e.g., Newton et al., 2020; Smith & Hardin, 2018). Originally developed as a ten-item unidimensional construct, athletic identity was later redefined by Brewer and Cornelius (2001) as a seven-item multi-factor construct, comprised of social identity (i.e., "I consider myself an athlete"), exclusivity (i.e., "Sport is the most important thing in my life"), and negative affectivity (i.e., "I feel bad about myself when I do poorly in sport").

Although the athletic identity of college athletes has been studied extensively, findings regarding athletes' competition level are inconsistent (Sturm et al., 2011). For example, Huml (2018) discovered that Division I (DI) and Division II (DII) athletes exhibited stronger athletic identities compared to their Division III (DIII) counterparts. This finding aligns with the recent work of Stokowski and co-authors (2022), which determined that DIII college athletes demonstrated a weak identification with their athletic roles. Mathews and co-authors (2021), however, did not find the athletic identities of football players to differ significantly according to NCAA division. Sturm and colleagues (2011) also reported comparable findings between DI and DIII athletes, as did Smith and Hardin (2018). Greater consensus regarding the strength of athletic identity exists when comparing male and female athletes, with male athletes exhibiting stronger athletic identities (Sturm et al., 2011), which is attributed to females prioritizing their academics (Rubin & Moses, 2017).

Athletic identities are believed to be dynamic, shifting and evolving over time. Research has found athletic identities dim as athletes progress through college and as graduation approaches (August, 2020; Lally & Kerr, 2005). Further, numerous studies have reported that athletes experience a loss of identity after college (Bopp et al., 2024; Harry & Weight, 2021; Manthey & Smith, 2023; Menke & Germany, 2019; Smith & Hardin, 2018; Stokowski et al., 2019). College athletes' athletic identities are also influenced by their support teams, such as coaches, whose regard for academic ability can predict athletes' athletic identity (Feltz et al., 2013). Athletes' athletic identity can also be impacted by the organizational culture of DI college athletics, as it pushes athletes toward a greater focus on athletics at the expense of their academics (Jayakumar & Comeaux, 2016).

Possessing a strong athletic identity or holding collegiate athlete status can be strategically leveraged to enhance career opportunities and compensation. Athletes with strong athletic identities are more enthusiastic regarding their future and more likely to pursue a career in a sport-related profession (Weight et al., 2014, 2015). Athletes also report higher wages and job satisfaction compared to non-athletes (Sauer et al., 2013; Weight et al., 2018), with their membership on collegiate sport teams seen more favorably than non-sport experiences (Chalfin et al., 2015).

To address the study's purpose, Brewer and Cornelius's (2001) three constructs of athletic identity and the existing body of athletic identity literature (August, 2020; Harry & Weight, 2021; Lally & Kerr, 2005; Stokowski et al., 2019) guided the exploration of former athletes' social identity, the significance of sport in their lives during and after college, and how they were affected by poor athletic performances.

Career Preparedness

The study was also guided by the conceptual framework of career preparedness. To date, researchers have adopted several comparable terms to examine athletes' career preparedness, including career readiness (e.g., August, 2020; Davis et al., 2022), career maturity (e.g., Houle & Kluck, 2015; Mathews et al., 2021), career development (e.g., Park et al., 2017), and career planning (e.g., Lally & Kerr, 2005; Tyrance et al., 2013).

In their recent review of the literature, Marciniak and colleagues (2022) presented career preparedness as an organizing framework, which they defined as "the attitudes, knowledge, competencies, and behaviors necessary to deal with expected and unexpected work- or career-related transitions and changes" (p. 22). Their review also found career preparedness is best explained by three components: (a) attitudes (i.e., an individual's thoughts and feelings toward a career decision and entering the workforce; Crites, 1978), (b) knowledge and competencies (i.e., skills and abilities pertaining to career preparedness that are developed by an individual; Akkermans et al., 2015), and (c) behaviors (i.e., the behavior of career exploration; Hirschi et al., 2015).

As acknowledged by Brewer and Petitpas (2017), the career planning and exploration literature is also inconsistent. Several studies have identified inverse relationships between athletic identity and factors related to career preparedness (Houle

& Kluck, 2015; Murphy et al., 1996; Tyrance et al., 2013), while others have found no significant effect (Brown & Hartley, 1998; Kornspan & Etzel, 2001). In contrast, some research has reported a positive association between athletic identity and career decision-making self-efficacy (Cabrita et al., 2014) as well as career exploration (Poux & Fry, 2015).

College athletes' sport participation restricts athletes' opportunities for career exploration as it acts as a barrier to internships and job experience during college (Turick et al., 2021). To temper athletes' lack of preparedness while accounting for the restrictions and time constraints athletes face, scholars have recommended athletes place a greater emphasis on developing multiple identities (e.g., Bjornsen-Ramig et al., 2020; Harry & Weight, 2021) universities develop purposeful athlete programming (Kloetzer & Taylor, 2023; Navarro et al., 2019) and educate athletes on how best to utilize support systems (Davis et al., 2022; Ishaq et al., 2023).

The inconsistencies in the college athlete athletic identity and career preparedness literatures speak to the difficulty of examining a vast sport setting with multiple levels of competition and dozens of sports (cf., Stokowski et al., 2019). Studies examining college athletes' experiences are often restricted to athletes from one institution, sport, or division (e.g., Adent et al., 2024; Zvosec et al., 2023). But college athletes' experiences vary greatly (Coakley, 2021). To maximize the representativeness of the study's sample and minimize its limitations, all divisions and sports were included in this present study.

Method

The researchers approached the current study from a phenomenological perspective to understand how the participants make meaning (Van Manen, 2007) of their experience of how their athletic identity and commitment to their athletic role influenced their career preparedness. Through the interview process, participants reconstructed and reflected on their experiences as they were lived, felt, and understood (Wertz, 2011). A phenomenological approach allowed space for the temporality and transitory nature of human experiences (Seidman, 2013), which helped the researchers grasp what was pivotal to participants' experiences in this study, as interviews were conducted after the period of time under investigation.

Participants and Procedures

Upon receiving institutional approval, participants were recruited using purposive and snowball sampling techniques (Bryman, 2012). Participants were recruited through two of the researchers' college sport networks and via private social media groups exclusive to former college athletes (e.g., NCAA After the Game LinkedIn group). Upon receipt of approval to share the study from group administrators, an initial post informing group members of the study was sent in the Fall of 2023, with one follow up post sent one month after the initial post. Data collection continued into Spring 2024. To be eligible for participation, individuals must have graduated no less than four years and no more than twenty years prior to the interview. This

range was considered appropriate as it facilitated the generalizability of the findings to a broader population of college athletes. It avoids being overly specific to a particular cohort of former athletes, while also allowing for an adequate period between graduation and the interview to enable participants to reflect on the effectiveness of their preparation.

The study's purpose along with requirements for participation were shared, with those interested in participating asked to contact the primary investigator (PI). The PI then coordinated with participants to determine an appropriate time for conducting the interviews via Zoom. Twenty-two semi-structured, in-depth interviews were conducted by two researchers. For a breakdown of participant demographics, see Table 1 below.

Table 1
Participant Demographics and Stage of Athletic Reckoning

Pseudonym	Gender	Race	Sport	Graduation	Division	Athletic Reckoning Stage
Anna	Female	White	Soccer	2011	DI	2
David	Male	White	Swim	2012	DI	1
Holly	Female	White	Soccer	2019	DI	1
Jane	Female	White	Tennis	2017	DI	1
Mike	Male	White	Soccer	2015	DIII	3
Tina	Female	Hispanic	Soccer	2018	NAIA	3
Caitlin	Female	White	Lacrosse	2014	DIII	2
Craig	Male	White	Baseball	2011	DI	3
Kyle	Male	White	Baseball	2007	DI	2
Taylor	Female	Hispanic	Swim	2020	DI	2
Abby	Female	White	Softball	2020	DI	2
Jeannie	Female	White	Softball	2005	DI	1
Chris	Male	Black	Track	2013	DI	1
Katie	Female	White	Softball	2019	DI	3
Lilly	Female	White	Lacrosse	2006	DI	3
Rosie	Female	White	Track	2006	DI	3
Scott	Male	White	Hockey	2015	DI	1
Jasmine	Female	Black	Basketball	2007	DI	2
Leo	Male	White	Gymnastics	2018	DI	2
Tom	Male	White	Soccer	2010	DII	3
Aaron	Male	White	Baseball	2011	DIII	2
Henry	Male	White	Track	2015	DI	3

The previously identified conceptual frameworks and the review of the extant literature informed the interview guide. Probing and interpreting questions were employed to foster greater insight into participants' lived experiences (Kvale & Brinkman, 2009).

Interviews began with fact-based questioning (e.g., "What sport(s) did you play at the collegiate level?", and "What college(s) did you attend?") to put participants at ease. Questions then evolved to examine participants' college selection (e.g., How did you end up at your specific college?", and "how did you decide to pursue your specific degree program?"). Questions were framed to acknowledge the variance in how college athletes may select their college and degree. For instance, some athletes choose a school they believe to be the best fit, while other athletes choose the school extending the greatest scholarship offer. The interviews then progressed to examine the collegiate experience of participants, which included questions on athletic identity ("How important to your identity was your athletic role throughout your years as a college athlete?") and career preparedness ("How would you describe your behavior toward career preparedness in college?").

Interviews then segued into discussions about participants' career experiences. Questions probed how athletes' initial career experiences were shaped by their collegiate years (e.g., "How were your initial years in your career impacted by your career preparation in college?", and "How did your initial career experiences align with how prepared you felt as you approached graduation?"). The interviews concluded with participants asked what they might have done differently during college, knowing what they know now, and with requests for advice they would provide to current and future college athletes.

Data Analysis

Interviews were transcribed verbatim and sent back to the participants for member checking to enhance trustworthiness (Creswell & Miller, 2000). Participants were given the opportunity to amend, add, or retract any data. All participants were satisfied with their transcriptions. In the first cycle of coding, the researchers coded the interviews individually using initial or open coding, whereby the researchers broke down the data into discrete parts, and compared them for similarities and differences (Saldaña, 2021). The researchers then met as a team to review their initial codes and to establish a codebook for second cycle coding. During second cycle coding, all transcriptions were coded a second time using a combination of two coding methods. The researchers employed both axial coding in which the number of codes was reduced by combining codes, and pattern coding during which themes began to emerge as similarly coded data were grouped together (Saldaña, 2021). After second cycle coding, the researchers met to discuss and finalize themes. The researchers' analysis by way of in-depth discussion produced the athletic reckoning process in which four themes emerged as well as several associated subthemes.

Positionality

It is important to acknowledge that the researchers inherently come to this research with biases as they are all former college athletes. As such, the researchers

regularly confronted their own biases as it related to the research. Throughout the process of conducting this research, the researchers' positionality as former college athletes contributed to reflexive findings. Frequently during the analysis process, discussions returned to their shared experiences as college athletes. The researchers even found themselves questioning how well they had transitioned from their own athletic identity to professionals, as they all currently pursue academic careers in the sport discipline.

Findings and Discussion

The purpose of the current study was to examine former college athletes' perception of how their athletic identity and commitment to their athletic role shaped their career preparedness. In addressing the study's purpose, data analysis identified four broad themes: Deep-Rooted Athletic Identity, The Athletic Reckoning, Deficient Preparedness, Regrettable Scholar, Unregrettable Athlete. Athletic identity was deep-rooted within the experience of every participant and emerged as an overwhelming experience shaping all aspects of the study's findings. Given the interconnectedness of athletic identity's to the study, as well as its role as a standalone theme, it informed the remaining themes to varying degrees. Findings, therefore, are structured to reflect how (a) Deep-Rooted Athletic Identity interconnects with (b) The Athletic Reckoning, (c) Deficient Preparedness, and (d) Regrettable Scholar, Unregrettable Athlete.

Deep-Rooted Athletic Identity

This study provides another dose of material for the ballooning body of literature emphasizing and detailing the deep-rooted nature of the athletic identity. However, our findings diverge from much of the current literature indicating college athletes suffer a loss of identity after retirement (Bopp et al., 2024; Lally, 2007; Manthey & Smith, 2023; Stokowski et al., 2019). Rather, our study found that the athletic identity remains a central part of former athletes' identities, long after their collegiate careers have ended.

Among the 22 former athletes interviewed, the degree of identification was high across the board, if difficult to quantify exactly in these qualitative sources. But certainly, the stickiness of athletic identity deserved pause. Our participants talked about their athletic identity as a near constant through college and continuing into adulthood. Even when the circumstances changed dramatically, identity seemed to be a lagging indicator. Said Anna, "It's because I enjoyed it so much. I feel like in my heart and in my head, I am a soccer player even to this day. I'm 33 years old and I still consider myself a soccer player." Craig has had a similar experience:

> I don't know, even now, I mean, it's weird because I don't see myself identifying that way. But then when we do an icebreaker at work or something, I always go to my go-to, which is I played baseball. So, I guess maybe in a sense I do sort of identify that I was an athlete and played baseball, but I try not to, or maybe consciously don't think I do.

The sport was different for Abby, as was the location in the United States, but the stickiness of athletic identity sounded similar, "Even to this day, I'm still like, 'Oh, I played softball at [University].' It's still something that I associate really heavily with."

As demonstrated by previous scholars (Lally & Kerr, 2005; Mathews et al., 2021) there can be academic costs to this intense athletic identity. The hyphenated student-athlete (Paule & Gilson, 2010) was rarely balanced in our sample group. As Kyle pointed out, the attention for academic achievements often didn't match up to those for athletics:

> Identity-wise, it was definitely athlete first. And I think some of that was probably me internally, you like that and you're proud of it. I mean, you dedicate so much of your day and your week to that, it's kind of all consuming, but also just culturally, it's like it's the only thing that people talk about with you. I mean, I would come home on breaks or whatever, and it's like people are asking about practices and sports and team and the upcoming season. And so, it's also driven externally quite a bit too.

Or as Aaron put it, much more succinctly, "So yeah, I was proud to be an athlete. I would say, at the time, I was definitely an athlete-student, not a student-athlete."

Like the extant student-athlete athletic identity literature (e.g., Bjornsen-Ramig et al., 2020; Harry & Weight, 2021; Smith & Hardin, 2018), we too found participants identified strongly with their athletic roles during college. Importantly, our findings also illumine the challenge of shedding or suppressing strong athletic identities well beyond athletic retirement. This is important as it contrasts with many studies of former athletes (e.g., Bopp et al., 2024; Lally, 2007; Stokowski et al., 2019), as findings suggest an athletic identity can remain a salient part of individuals' long-term and after-sport identity.

The Athletic Reckoning

A different phenomenon rose to the surface as we analyzed the interviews: the athletic reckoning. We define athletic reckoning as the watershed moment athletes realize the formal, organized portion of their athlete life is over, or soon to be over, and begin to shift their focus to other aspects of their development, specifically their academics and career preparedness. We found athletic reckoning to be inherently tied to athletic identity, career preparation, and academic focus.

The occurrence of an athletic reckoning varies based on a wide set of circumstances. For some, it can be as simple as the exhaustion of eligibility and/or graduation. For others, it's being cut from a team or having a scholarship revoked (Burns et al., 2012). Or it's a career ending injury (Perrier et al., 2014) or the realization that there's no professional future. We also noted the variable timing of athletic reckoning, which we found generally occurred at three different stages 1) before competition ended, 2) just as competition ended, or 3) long after competition ended (Stage 1 = 6 athletes, Stage 2 = 8 athletes, Stage 3 = 8 athletes). Interestingly, only DI athletes experienced an early athletic reckoning, and athletes from small colleges (e.g., DII, DIII, and NAIA) were among those who experienced late reckonings. This finding is surprising, as it counters prior research that has attributed the organizational cul-

ture of DI universities to heightened athletic identities (e.g., Jayakumar & Comeaux, 2016). Our findings suggest neither the Division nor sport impacted the strength of athletic identity, which aligns with prior research determining no difference in athletic identity according to Division (e.g., Mathews et al., 2021; Smith & Hardin, 2018; Sturm et al., 2011). Our findings may be explained by the low-profile sports our participants played and suggest athletic identity development or athletic reckonings of athletes in lower-profile sports may not vary considerably across Divisions or sports. Six athletes interviewed explained the process of winding down as a student athlete before the athletic music stopped. Consider Holly:

> I kind of knew from the get-go that I was going to be done in four years, and then what was I going to do then? And so yeah, I had kind of been thinking about it for a while, just because I knew that I probably wasn't going to go play pro.

Scott also experienced his athletic reckoning voluntarily, and prior to graduation, "I took the opportunity in school. I became curious and wanted to learn. It stemmed from knowing I wanted to do more with hockey, but knowing I was excited for my next journey in life."

David, on the other hand, realized after his junior season that he would not make the Olympic team. A specific event, therefore, helped him downshift and move away from athletics towards academics:

> And honestly? Reflecting back on it, I was extremely fortunate that the [Olympic] trials fell when they did. For me, it was at a point in my college career where I still had enough time to really turn things around academically. I wasn't doing poorly but really turn things around and improve my GPA. I had enough time then to create networks, understand where I wanted to go, get a vision while I was still in school, and adapt my courses to move towards that vision. Because if that had happened in my senior year, I think I would've been up shit creek without a paddle.

Jeannie and Chris had similar experiences to David, in that an event such as an injury incentivized them to shift their focus from sport and explore vocational opportunities, as Jeannie noted:

> Getting injured was advantageous because I was able to do an internship and I was able to use my year off to catch up and explore education. Getting injured was like, 'Okay, there is more to life than this.' And that is when I really kicked into gear academically, career-wise.

For eight athletes, the athletic reckoning arrived when we might expect it. It occurred when one's eligibility expired. The student was forced to grapple with the end, or with the beginnings of the end of athletic competition. Caitlin reflected that the "Band-Aid was ripped off with no warning. It was hard and a weird state of mind. And I remember thinking, 'Well, what do I do now? What do I do now?' I don't think I was prepared for that." For these athletes there was outright shock as the end arrived, despite the 4-year parameter of college competition being a ubiquitous fact in American athletic life. Said Abby:

> Midway through senior year I was like, "Oh my gosh, there's a real world

> out there. What's a job even look like?" I went to my academic advisor and being like "Okay, so here is my major. What do I do with Art History?" and so I thought a little about museums or some sort of art auctioning.

Perhaps most interesting are the eight former athletes who indicated that their reckoning was delayed well beyond the time when their final competition occurred. The reckoning dragged on for months or years. For six of these participants, transitioning to a Graduate Assistant, coaching or a sports related career served as a bridge that allowed the athletic identity to remain intact. Lilly was among those who used coaching to blur the finality of her athletic career ending: "I don't know if maybe some of the underlying reasons why I just transitioned into coaching was a needing to figure out how to close the door with soccer and athletics in general." As did Tom:

> I think I wanted to just keep playing soccer and either try to play after soccer somewhere or coach. I wanted to stay in soccer in whatever capacity I could. So, it was somewhat of an easy transition to go from being a collegiate player to a collegiate coach.

Like Lilly and Tom, Tina was not prepared to walk away from sports, and found a path for staying in athletics, "When I got the chance to come back and be a graduate assistant for athletics, that was my way of getting reconnected with the sports world, getting my foot back into that athletic world."

Our conceptualization of 'The Athletic Reckoning' provides an important contribution to the extant athletic identity and career preparedness literature as it pinpoints a pivotal moment in all college athletes' career preparedness journey. By identifying the significance of the athletic reckoning's timing, our findings illumine how earlier athletic reckonings may enhance career preparation and smoothen transitions out of sport. We also found our participants experienced a watershed moment where their mindset altered, instead of a gradual shift overtime. Further, our findings indicate this moment can occur long after sport retirement, which does not align with prior work (Lally & Kerr, 2005; Steele et al., 2020). Overall, the idea of 'Athletic Reckoning' deserves further investigation. Although it seems straight-forward ("In sports, it's kind of like you have an expiration date" explained Jasmine, for example), in reality the dimming of one's athletic identity and career is often a complicated, traumatic, and drawn-out life experience.

Deficient Preparedness

Ideally, college is spent preparing for and exploring future careers (Turick et al., 2021). However, this theme reflects former athletes' sense of ill-preparedness resulting from their dominant athletic identity. Participants described experiencing career indecision and confusion, missing professional development opportunities due to their involvement in sport, and using graduate school to correct deficient preparedness. They also shared the consequences they faced due to their poor career preparation.

Fourteen participants explained how their athletic priorities during college left them insufficiently prepared. For example, Leo shared what he would change, in hindsight, to better prepare himself, "What I would've changed is maybe less about

specifically what I'm studying, but putting the emphasis on analyzing what careers are, what actual jobs exist in the world in anything that I think is interesting." When asked why he had not put the emphasis on analyzing what careers are, he responded "The thing is, although gymnastics gave me an unbelievable amount of opportunities, it kept me from being able to learn about things, other things, areas of interest and passion." Tina also explained how sport was her focus:

> As an athlete, the focus is just your sport. Yeah, you're doing your homework, going to class, and getting the grades. But at the end of the day, your focus, your attention, is in the sport. The biggest thing that did not prepare me for a career was that my mind was so plugged in the athletics world.

This was also true for Craig, a baseball player who harbored thoughts of a professional career, "I just never really thought about what if baseball never works out."

All participants who experienced a delayed athletic reckoning, and half of the participants who experienced their reckoning as they graduated treated career preparation as an afterthought. For instance, Anna struggled for direction after she graduated, "I was lost after college and maybe I would've had better direction, which maybe would've set me up." Anna continued to reflect on her preparedness by recalling an uncomfortable job interview. She recollected:

> The recruiter was like, 'You're a little unprepared. I suggest you go back, review your resume, and figure out what you want, and then maybe come back to us.' And then when I went home from the interview, I was like, 'No, I actually don't know what I want, and I don't know what I like.'

In discussing what he would do differently if he could have his time over again, Tom mentioned, "Maybe thinking about what's the degree I want to get, how's that going to translate to a job? So, maybe being a little more hyper-focused academic and career wise parallel to soccer." Craig felt his lack of preparation was caused by a failure to prioritize work experience, "I remember looking, and starting to look at internships. And this is my last year. It's like, 'No, no, you should have been looking at internships a year or two ago.'" He ended up "doing a little bit of a scramble like, 'Oh yeah, what do I do?'"

Nine participants corrected their lack of career preparedness by pursuing a graduate degree with greater academic purpose. For example, Henry explained, "I learned my lesson from undergrad. The reason I am in my current career is through networking while I pursued my MBA." Kyle acknowledged his undergraduate degree misaligned with his career aspirations and doubted he was the only one. He said, "I had to go back, I had to go back to school again. And it's like, 'How many athletes are doing that?' That's unfortunate." Aaron was one of those athletes, and lamented the time and cost of graduate school:

> I figured out I wanted to go into accounting. My father-in-law is a CPA, so I learned a little about that pathway. But it sure would have been nice to just go and get my four-year accounting degree straight out of the gates and be done with school.

Jasmine chose graduate school because she was "terrified of real life." She said, "I have no idea what I'm going to do, I've got to go back and figure this out."

Former athletes who felt unprepared for their careers also shared their experience of the job market. As years had passed since their graduation, they were able to describe in detail how their career progressed. For instance, Rosie explained:

> I had a couple of interviews before I graduated. One of them was with a special school for behaviorally challenged girls. It was really cool what they were trying to do. But it was minimal pay, and not really for someone with a teaching degree. I thought I wanted to focus on teaching. I ended up not taking the job. The job search was so overwhelming. I went into the restaurant industry for a while. Then I became a restaurant manager. I did that for a couple of years. I've done various jobs. It's so hard. I just found it difficult to think about a career in college.

Mike also spent years after college exploring careers, before settling on his current occupation in the nutrition industry:

> Let's see, I had three jobs straight out of college. I coached. From about five to eight AM, I worked at a FedEx facility doing packages. And then during the day, I worked at a community college at their bookstore. And so, I had those three jobs going for about a year and then decided, "All right, I want to get into the workforce. I want to have one job with a salary and work the nine to five life." That job was in the auto industry. I did that for about two years. And again, it just wasn't a great situation. I wasn't into it; I wasn't interested in it. So started looking for roles, new jobs, and this one job came up that was in a nutrition company. So, I said, "All right. I never thought about getting into nutrition," but being an athlete, I was very nutrition conscious. Right?

In line with the emerging career preparedness literature, we found college athletes feel unprepared for their career after sport (August, 2020; Houle & Kluck, 2015; Lally & Kerr, 2005; Tarver III, 2020; Tyrance et al., 2013). However, by qualitatively investigating former athletes' preparedness in-depth, our findings provide a needed contribution by capturing the perspective of athletes who have tested their career preparedness. Former athletes were able to express how and why they were unprepared, the consequences of poor preparation, and how they tried to mitigate their lack of preparedness. This approach proved valuable, as findings suggest a delayed athletic reckoning may lead athletes to attend graduate school. Better career preparation might have saved these athletes from both the time commitment, and expense of graduate school.

Although Zvosec et al. (2023) recently examined former athletes' career preparedness, their sample consisted of high-profile student athletes in one sport (Division I football players). By including athletes from low-profile sports, all divisions, and both men's and women's teams, our findings represent a far broader population. Since low-profile college athletes' odds of competing professionally are likely lower, one could argue their career preparedness is even more important.

Regrettable Scholar, Unregrettable Athlete

The theme of Regrettable Scholar, Unregrettable Athlete underscores this dis-

cordant relationship between student and athlete. The participants in this study had divergent experiences when reflecting on their time as college athletes. While the participants did not hold many regrets regarding their sporting experience, the same could not be said for their academic experience. The theme of Regrettable Scholar, Unregrettable Athlete addresses the dichotomous experience of college athletes who perceived their athletic experiences positively while simultaneously regretting their academic experiences.

Academic Regrets

Fourteen participants in this study regretted their academic experiences in a myriad of ways. These regrets were sometimes the result of personal academic choices, but also due to the time demands associated with college sports, and in some cases the influence or coercion from athletic coaches.

Over half of the participants with academic regrets bemoaned their own lack of effort. For instance, Jasmine said, "I do regret that I really didn't study as much as I knew that I could. I was just kind of coasting." Katie very plainly stated that she did not have the appropriate academic focus, "I feel like I really didn't take school as seriously as I should. So, it caught up with me in the end."

For one participant the lack of academic focus and associated regrets still haunts them. Leo said, "I just maintained good grades. I wasn't a poor student, just wasn't as good as I'm now realizing I could have been, which is super, super frustrating for me right now."

Athletic Satisfaction

Not one of the participants in this study regretted their athletic experience. Some participants spoke more generally about how they did not regret their experience as a college athlete while others had more concrete reasons for holding their experiences in high regard. A notable pattern within this theme is that the participants' satisfaction could be largely attributed to the intangible skills related to personal and professional development learned through sport participation, not to say there was no satisfaction in the physical pursuit as well.

Rosie recognized the challenges that came with the college athlete experience and yet still labeled it positively saying, "Yeah, it was just all-consuming, and I don't regret a lot of it or anything like that. I think it was a really great experience for a lot of reasons." An example of the appreciation for the soft skills learned through sport came from Mike when he said:

> I think sports for me, in general, taught me a lot in life. Discipline was a big one being applied. Getting to where you need to be on time, listening, paying attention. Those were huge. Being a team player, learning how to basically shake off mistakes and do better.

Craig commented on both the perceived social and career benefits associated with his experience, "There are so many relationships I still have today with people. And I mean, it is really a resume builder in a lot of different ways." Jasmine also spoke of the virtues of college sport participation, further reinforcing the social benefits

saying, "…it was what it was, and it was the most amazing experience in my life, and I still have the greatest friendships from that." Chris summarized this idea of the future life skills attained through college sport participation when discussing the advice he would give to current college athletes. He said, "I hope that it provides them with the resilience to handle what's to come in real life. I think that's what my experience did."

Even the participants who struggled with their athletic performance regarded their sport experience as mostly positive. For example, in the case of Henry, he said, "But I was satisfied with it at the end. I was satisfied with the (athletic) struggles and everything." Taylor echoed a similar sentiment:

> I'm very happy that I swam in college. I'm happy I didn't quit, and I swam all four years. And I'm happy that I went through kind of the struggle and the transitional struggle that I went through because it's gotten me here.

An example of a participant acknowledging satisfaction from the physical pursuit of sport came from Jane when she simply commented, "I gave it my all on the court. So, when it was all said and done, I hung it up. I was satisfied with what I did." She went on to recognize the feeling of satisfaction that came from her on-court growth commenting, "For me, to actually play at [University] and play for five years, I was satisfied with how far I came."

Lack of Mentorship

As participants discussed mentorship beyond their athletic participation, all but five participants deemed it insufficient. This was particularly true of former athletes attending smaller schools, like Tom who explained:

> There just wasn't good input and advice of, 'What do you like? And here's what you can do and here's where you can go and here's what a career looks like.' I really had none of that. I felt like I had very little support.

Tom's experience was not unique. Rosie shared a similar experience, "There was never any thought given to what might happen for me. I was recruited for this sport. There was never a mention of like, 'maybe you should have a plan B in case sport doesn't work out.'" Although athletes expressed dissatisfaction with institutional mentorship, 10 participants acknowledged the existence of resources and admitted fault for failing to utilize institutional support. For instance, Chris confessed, "I wish I would have been more intentional about networking, career opportunities and attending career fairs. Actually attending career fairs and taking them seriously." Craig was equally honest in his self-assessment of his intentions during college, "They gave us study hall, tutors, everything. I'd say a lot of it was on me. I had all the resources. I decided I'd party and play ball rather than tap into all that. It was more on me."

As athletes described themselves as Regrettable Scholars but Unregrettable Athletes, athletes articulated their regrets and assumed partial blame for some of their actions that contributed to their suboptimal career preparedness. This is a key finding, as athletes acknowledged how their own failings contributed to their lack of preparedness. This is likely explained by our sample's benefit of hindsight. Former

athletes have had time to marinate on their experiences and gain greater emotional distance from the events they are describing, which allows for more honest reflections (Liberman & Trope, 2008).

This finding is also noteworthy as institutional programming is often proposed as the solution to transition issues (Navarro et al., 2019). Our findings show the building and implementation of resources, interventions, and programing alone is not enough. Athletes do not appear to see sufficient value in available programing or appreciate how engagement can help. To promote greater athlete engagement, encouragement from influential figures may be required, such as former college athletes or other members of their college sport environment.

It is striking that in spite of their participation in college sport appearing to inhibit their career preparedness, former athletes would still elect to be college athletes if they had their time over. Intuitively, one would expect if individuals believed an activity hampered their vocational development, that one would disengage with that activity. But this is not the case here. It is, perhaps, further evidence of the significance of sport and the athletic identity.

Theoretical and Practical Implications

Like Harry and Hammit (2024), our data diverge from most of the extant athletic identity scholarship which reveals athletes experience a loss in athletic identity (Bopp et al., 2024; Manthey & Smith, 2023; Menke & Germany, 2019; Smith & Hardin, 2018; Stokowski et al., 2019). Yet, unlike Harry and Hammit (2024) the existence of an athletic identity was prevalent in our data, which highlights the enduring nature of social identity. Specifically, our findings show the social identity component of athletes' athletic identity can remain prevalent for a decade or more after collegiate careers, even when exclusivity and negative affectivity have receded.

The concept of the athletic reckoning also emerged from our data, which denotes the moment when the exclusivity of sport in an athletes' identity is challenged, and reprioritized. Moreover, the athletic reckoning may function as a marker of career preparedness among athletes. An earlier athletic reckoning may be associated with a greater likelihood of engaging in career preparedness. This is important, as our findings suggest that career preparation is a process requiring time and sustained, intentional engagement well before a work or career change takes place. Finally, our study illuminates the potential outcomes associated with deficient career preparedness. Specifically, our findings show that a lack of career preparedness can result in frequent job changes or enrollment in graduate degree programs to address their career preparedness gaps.

Most athletic departments' support programs and resources available to athletes are tied to enhancing their collegiate experiences (Navarro, 2015). Like Harry and Hammit's recent study (2024), our findings support a rethink for how best to support athletes' preparedness. Although some participants reported a lack of available support programs, of most concern in our study was the discovery of former athletes' avoidance of available support programing. Given athletes' avoidance, we recommend coaches and athletic administrators concentrate efforts on ensuring athletes

recognize the enormity of their career preparedness. Athletic departments could establish alumni mentorship programs and invite former athletes to share their vocational experiences with current athletes. Former athletes with sport-specific ties (e.g., invite former swimmers to speak to current swimmers) can deliver the most accurate depiction of what to expect, while also fostering a level of relatability that others cannot achieve, thereby maximizing the likelihood of athletes being receptive (Harry & Hammit, 2024).

Athletic and university administrators could also introduce a mandatory course or seminar during athletes' sophomore year, requiring them to develop a 'Plan B.' Offering this course in the sophomore year aligns with a stage one athletic reckoning, providing athletes with sufficient time to prepare for their career. Through this course, athletes establish an early career objective and develop a vision for how to achieve it. Even if the course fails to prompt an athletic reckoning, it will offer a valuable framework for athletes to return to when ready.

Finally, efforts to reduce or shed athletic identity should be avoided. Academic identity and career preparedness should not be treated as mutually exclusive from athletic identity. Instead, athletes might find alternative forms of sport and exercise participation (e.g., coaching, exercise habits and routines, sport club membership) a vehicle for adapting their athletic identity without abandoning it. In addition to adapting their athletic identity, alternative forms of sport and exercise participation can help athletes develop community after college.

Limitations and Future Research

As with all studies, ours has limitations. First, although we intentionally recruited former college athletes, recognizing the potential value their perspectives could provide, we acknowledge the limitations of asking participants to recall experiences from events that occurred years prior (Colombo et al., 2020). To mitigate this potential limitation, we employed member checking practices with all participants. Member checking allowed participants to review their interview transcripts to reaffirm their accuracy. The representativeness of our sample is also a limitation, as nearly 80% of our participants competed in Division I sports. This imbalance in divisional representation may have influenced our results.

It is clear that further investigation into the athletic reckoning is necessary. Although we are confident in the legitimacy of our findings, as the first study to identify this pivotal reckoning, additional studies are needed to ensure our study's reliability, and to extend our understanding of it. Our conceptualization of athletic reckoning could be used to guide further exploratory studies, with both college athletes and other elite athlete populations.

Conclusion

In conclusion, we found former college athletes experienced an 'athletic reckoning'. That reckoning sometimes occurred before an athlete had actually stopped competing, and sometimes long after an athlete left college altogether. At the time

of this reckoning, college athletes acknowledged their elite sport participation was ending, or had ended, and shifted their focus and priority to their vocational development. We found the timing of the athletic reckoning could also be an indicator for athletes' career preparedness. It is important to understand that athletes must experience a reckoning of some sort as it allows us to explore pathways for facilitating this process, with the aim of mitigating some of the negative outcomes experienced by a late reckoning.

Our study also highlighted the importance of fostering athletes' engagement with, and appreciation for, career development programs. The design and implementation of tailored programing to support athletes is necessary but insufficient. Athletes are aware of these programs but elect not to attend. Therefore, tailored programming must be accompanied by efforts to stimulate athlete engagement.

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Going Beyond Training to Foster LGBTQ Inclusive Collegiate Athletic Contexts: Identifying Next Steps

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This qualitative study explored how to facilitate greater inclusion of LGBTQ student-athletes and employees within the context of a collegiate athletic department that participated in a multi-level bystander intervention training for athletes, coaches, and staff. Beyond scholarship that recommends an initial educational training, there is limited literature detailing possible next steps athletic departments can take to facilitate a welcoming and inclusive environment for LGBTQ student-athletes and employees. Eighteen interviews were completed with coaches, athletic department staff, and a student-athlete. The thematic analysis revealed five themes summarizing potential next steps athletic departments could take: (1) Expand Training and Education Efforts, (2) Increase Acceptance and Accountability Across the Athletic Department, (3) Shift to Action, (4) Increase Visibility of LGBTQ Inclusion, and (5) Develop Resources for LGBTQ Students and Employees. The findings of this study provide concrete implications for creating more inclusive spaces, practices, and policies for LGBTQ individuals within collegiate athletic departments.

The inclusion of athletes with diverse gender and sexual identities has recently been a central focus of discourse and debate within media, socio-political, and academic circles (Gastelum, 2022; Riedel, 2025). Although existing research has documented that collegiate athletics appears to be moving toward greater acceptance of lesbian, gay, bisexual, transgender, and queer (LGBTQ) student-athletes and athletic department employees, other studies have found that anti-LGBTQ discrimination and biases continue to shape the culture of collegiate athletics (Anderson et al., 2021; Atteberry-Ash et al., 2018; Cunningham, 2015; Cunningham et al., 2018, 2022; Pariera et al., 2021; Rankin et al., 2011; Toomey et al., 2018; Turk et al., 2019; Xiang et al., 2023). Yet, there is limited research that explores

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the steps athletic departments can take to provide a welcoming, inclusive, and safer environment for LGBTQ people (McGeorge et al., 2024). The recommendations that do exist were developed by the governing body of college athletics, the National Collegiate Athletics Association (NCAA), and include the following strategies: (a) develop inclusive nondiscrimination policies and codes of conduct that ban anti-LGBTQ behaviors, (b) provide annual trainings to staff and students, and (c) communicate and provide resources in inclusive ways (NCAA, n.d.). The scholarly literature has primarily concentrated on evaluating the recommendation to provide educational opportunities to athletic department members focused either on broad bystander intervention strategies or specifically focused on how to support LGBTQ individuals (Atterberry-Ash et al., 2018; Cunningham, 2015; O'Connell & Bottino, 2024). However, research has yet to explore recommendations beyond introductory trainings or educational opportunities. Therefore, this qualitative exploratory study sought to inductively identify strategies that might facilitate greater inclusion of LGBTQ student-athletes and employees within the athletic department context following the completion of an LGBTQ-focused, multi-level bystander intervention training for athletes, coaches, and athletic department staff.

Literature Review

Literature on creating an inclusive LGBTQ climate within the context of collegiate athletics is limited, however scholars have extensively explored promoting LGBTQ inclusive climates within primary and secondary school contexts. This school-based literature suggests there are four primary strategies to minimize risks for LGBTQ students and employees, as well as facilitate a more welcoming culture: (1) inclusive anti-bullying state, school, and/or district level policies; (2) professional development focused on LGBTQ identities and topics; (3) LGBTQ-inclusive resources for students and staff; and (4) student-led clubs, such as Genders & Sexualities Alliances (GSAs), which to an extent mirrors the suggestions made by the NCAA (NASEM, 2019, 2020; NCAA, n.d.; Russell et al. 2021). When discussing the importance of establishing inclusive anti-bullying policies, scholars specify that these policies need to include statements that bullying based on sexual orientation and gender identity are prohibited (NASEM, 2020; Russell et al. 2021). Anti-bullying policies that include protection for LGBTQ identities have been associated with more welcoming school climates for all students, and positive outcomes for LGBTQ students, such as fewer mental health concern, as well as fewer reports of anti-LGBTQ harassment and increased interventions by teachers when bullying does occur (Greytak et al., 2013; Hatzenbuehler et al., 2014; Kosciw et al., 2016; Kull et al., 2016; Russell et al. 2010, 2021). Griffin and Taylor (2013) argue for the importance of athletic departments developing similar LGBTQ-specific policies, with an emphasis on nondiscrimination and anti-LGBTQ harassment policies.

Researchers also found that when teachers received an LGBTQ-focused professional development training, they were more likely to intervene when they witnessed anti-LGBTQ harassment (Greytak et al., 2016). Notably, when general

anti-bullying training was provided without a focus on LGBTQ identities, the same pattern of intervention was not observed (Greytak et al., 2016). Within the collegiate athletic literature, researchers have highlighted the need for athletic departments to engage in educational opportunities that specifically focus on LGBTQ inclusion (Fallon-Korb et al., 2025; Havey, 2021; Kavoura & Kokkonen, 2020; O'Connell & Bottino, 2024; Toomey et al., 2018; Turk et al., 2019). In particular, Kavoura and Kokkonen (2020) argued that all members of college athletic departments likely require training given the general lack of information about how to reintervene when witnessing anti-LGBTQ harassment. Other scholars have argued that trainings need to be focused on coaches given their power within team structural hierarchies (Toomey et al., 2018).

The research on the role of LGBTQ-inclusive resources in promoting a welcoming climate for LGBTQ students on the collegiate level suggests that having designated LGBTQ safe spaces fosters an increase in students' sense of safety and connectedness (Evans, 2002; Katz et al., 2016). For students in primary and secondary school contexts, having access to positive information about LGBTQ identities can increase students' sense of safety (Kosciw et al., 2016). Finally, scholars have found that participating in student organizations such as GSAs has been linked to a number of positive outcomings for secondary students, including greater safety, an increased sense of connection and belonging, and more positive mental health outcomes (Ioverno et al., 2016; McCormick et al., 2015; Toomey et al., 2012; Toomey et al., 2011; Walls et al., 2010). Research has also documented school-level benefits related to having GSAs, including lower levels of anti-LGBTQ bias, discrimination, and harassment (Ioverno & Russell, 2020; Kosciw et al., 2016; Marx & Kettrey, 2016).

The strategies from the primary and secondary education literature mirror, to an extent, the recommendations made by the NCAA (n.d.) and could have the potential to be helpful in creating a welcoming and inclusive climate in college athletics. In addition to these strategies, the Transformational Tapestry Model (Rankin & Reason, 2008) provides a conceptual framework designed to assess and improve campus climate in higher education. Although athletic department contexts are distinct entities, they also represent a microcosm of the larger university climate. This model outlines several domains that apply to athletics, namely, intervention strategies of symbolic actions, educational actions, and administrative actions, as well as the influence of climate including access/retention, inter- and intragroup relations, policies, and external relations (Rankin & Reason, 2008).

Additionally, research on inclusive workplaces has documented both similar and unique strategies to improve climates for LGBTQ employees. A review of workplace studies identified that the most common and researched strategy includes policies that prohibit workplace discrimination based on sexual orientation and/or gender identity (Roberson et al., 2024). Other workplace policies and practices identified include diversity trainings, inclusive human resources policies, mentoring, and employee resource groups (similar to educational recommendation for GSAs or similar clubs; Roberson et al., 2024). In care environments, interpersonal quality was noted as a strategy for promoting LGBTQ inclusion, including pronoun and

name use, accurate terminology, and patient rapport (Hudson & Bruce-Miller, 2023). Other care environment strategies for LGBTQ inclusion include visual cues of inclusion (e.g., art, images, symbols), inclusive administrative environments (e.g., inclusive restrooms), competency trainings for LGBTQ inclusion, and outreach and engagement with LGBTQ community partners (Hudson & Bruce-Miller, 2023). Grounded in all of these strategies and the Transformational Tapestry Model as a conceptual base, this qualitative exploratory study sought to fill a gap in the collegiate athletics literature by seeking the recommendations of insiders (i.e., coaches, administrators, athletic department staff, and student-athletes) about how to improve the climate for LGBTQ student-athletes and athletic department employees.

The research questions for this qualitative exploratory study are based on a review of the existing literature within college athletics and school-based studies and are as follows:

RQ_1: After participating in a multi-level bystander intervention training for student-athletes, coaches, and athletic department staff, what do participants see as next steps to enhance LGBTQ inclusion within a college athletic department?

RQ_2: What are participants' dreams for how LGBTQ inclusion work moves forward within a collegiate athletic context?

Method

Data for this exploratory study were derived from interviews with participants following a pilot test of an LGBTQ-focused, multi-level bystander intervention training for student-athletes, coaches, and athletic department staff that occurred in a Division I athletics program in the Midwestern United States. The athletic program is comprised of 14 athletic teams (e.g., softball, volleyball, football) and is housed within a public, land-grant, research university (McGeorge et al., 2025). The intervention training provided education on how to explore personal biases and existing beliefs and offered ideas for intervention and prevention surrounding anti-LGBTQ bias and was led by one of the authors of this study. The current study includes a secondary data analysis of data gathered through a program evaluation of a grant-funded, LGBTQ-focused, multi-level bystander intervention that was supported by the athletic director. This study was approved by a university institutional review board.

Participant Recruitment and Sample Description

Initial participant recruitment involved contacting by email participants who indicated on a survey that they identified as LGBTQ and were willing to complete a follow-up interview, as well as emailing individuals who had indicated that they were interested in being involved in future LGBTQ trainings and identified as allies to LGBTQ people. The remaining recruitment efforts followed a purposive snowball sampling method. Specifically, interview participants were asked to recommend other potential participants and/or share study information (i.e., recruitment email)

with other student-athletes and staff within the athletic department (Nelson & Allred, 2005). When participants shared names of other possible interviewees, a recruitment email was sent to each individual inviting them to schedule an interview with the first author.

Of the 18 participants, seven (38.9%) were athletic department support staff (e.g., administrative assistant, trainer, academic advisor), five (27.8%) were coaches, four (22.2%) were senior-level management or directors, and one (5.6%) was a student-athlete. The participants ranged in age from 22 to 60 years (M = 38.39, SD = 11.92). All participants identified as cisgender, with 12 (66.7%) women and six (33.33%) men, and 13 (72.2%) identified as heterosexual, three (16.7%) as gay or lesbian, and two (11.1%) as bisexual. The majority of participants were White (n = 14; 77.8%), while two (11.1%) participants identified as biracial, one (5.6%) as Black, and one (5.6%) as Asian. Finally, 10 (55.6%) held master's degrees, two (11.1%) had completed some graduate work, and six (33.3%) held bachelor's degrees.

Data Collection

Participants first completed a demographic survey in advance of the interview and received $30 compensation in exchange for their time. Interviews lasted 17 to 40 minutes and were conducted over Zoom, recorded, and subsequently transcribed using the voice-to-text feature. All transcripts were then compared alongside the audio recordings and revised as necessary. The question on the semi-structured interview guide were guided by the existing literature (e.g., Toomey et al., 2018; Turk et al., 2019) and the input of individuals associated with athletics, and was comprised of open-ended questions and potential follow-up prompts. Sample questions from the interview guide include: "What changes would you like to see within the athletic department in regards to LGBTQ people's inclusion?" and "What do you think would help facilitate these needed changes?" Data collection occurred between December 2022 to September 2023.

Analysis

Data were analyzed using inductive, semantic thematic analysis (Braun & Clarke, 2006; Clarke et al., 2015). In line with later work on reflexive thematic analysis (Braun & Clarke, 2019, 2021), we approached theme development as an active, interpretive process, and engaged in multiple peer debriefing sessions to increase trustworthiness of the findings (Lincoln & Guba, 1985). To begin the analysis process, the authors read through each transcript to gain an initial understanding of the data to support our inductive analysis. Next, relevant sections of data were independently coded by the first and second authors, who then met for a peer debriefing session to compare codes and reach a consensus, hybrid understanding. Our coding and subsequent theme development was primarily semantic and close to the participants' words. We then identified potential themes and met for a second peer debriefing session to again compare understanding. Data were organized under the agreed upon themes and reorganized as needed, paying careful attention to achieving an accurate portrayal of the participants' words (i.e., semantic) while balancing our own latent meaning-

making (Braun & Clarke, 2006). We then met for a final peer debriefing session to select quotes to illustrate each theme. See the Figure 1 appendix for a visual depiction of the coding process.

In addition to utilizing peer debriefing sessions to increase the trustworthiness of our analysis, we also relied on practices of reflexivity (Braun & Clarke, 2019, 2021; Chilisa, 2012), recognizing that who we are as people impacts the decisions we make as researchers and how we perceive data. Through intentional conversations during peer debriefing sessions and writing positionality statements, we worked to minimize the impact of our biases and social locations had on the coding process. Shortened versions of our positionality statements are provided to situate our identities. The first author is a White, heterosexual cisgender woman, who is committed to being an ally to LGBTQ communities in her scholarship and daily life. She further recognizes the incredible amount of societal granted privilege she experiences and how that privilege could influence the data coding process, which heightened the need for her to actively engage in practices of reflexivity throughout the coding process. The second author is a White, bisexual/pansexual, cisgender woman also committed to advocacy. Finally, the third author is a trans, pansexual, man from rural Appalachia who is a parent and White. As an example of the reflexive process, we noticed a shared bias during data analysis around what constitutes a worthwhile or "sufficient" next step—tied to of our own educational privilege.

Results

The thematic analysis revealed five themes that addressed the research questions for this study: (1) expand training and education efforts, (2) increase acceptance and accountability across the athletic department, (3) shift to action, (4) increase visibility of LGBTQ inclusion, and (5) develop resources for LGBTQ students, athletes, and employees. Each theme is illustrated by verbatim quotations.

Expand Training and Education Efforts

Participants suggested that to promote a more equitable climate for LGBTQ employees and student-athletes within a college athletic department, additional LGBTQ training opportunities were needed. Participants' call for additional educational opportunities were geared toward both employees and student-athletes with the intention of addressing biases and improving understanding of LGBTQ identities as illustrated by the following quotations from Izzy and Lisa:

> I think more trainings for the student-athletes as well would be useful. Like, I think a lot of them have deep rooted views and viewpoints that I think need to be tackled. . . we have the athletic credit that all student-athletes are enrolled in, and it's like as part of it they have to take some classes. I think it would be useful to incorporate some LGBTQ training within there, and I think then, that could be facilitated by the staff in the athletic academics group.

> I think that it would be a good idea for each of the coaches to, have a yearly educational session on what that might look like. I also think that our administration, like I mentioned before, could do some education as well. Obviously, what you've done [referring to the interviewer], I think, has gone a long way, but I think that they could use more . . . until that openness to change is there, I think it's gonna take a lot of mandated training sessions and repetition and education.

These quotes reflect participants' beliefs that additional educational opportunities are needed across all athletic department constituents, and they also introduce the idea of needing to mandate or otherwise strongly encourage these trainings. The first quote from Izzy, for example, suggests tying these training opportunities to existing structures such as the mandated credits that student-athletes complete each semester as part of their eligibility requirements, while the second quotation from Lisa introduces the idea of mandating training requirements for coaches. In addition to mandating trainings, other participants discussed the need to incentivize and/or strongly encourage participants to attend these additional LGBTQ trainings as they worried about the impact of mandating attendance. The following quotations from Alice and Francis illustrate this idea:

> [Offering] food, apparel, because we tell our student-athletes, they'll go to something if you're going to feed them or if you're going to give them a t-shirt or something. And, you know you hate to make things mandatory. You want people to want to be there and do those types of things. I think the more we make it just important, and that it's a priority of us to understand these things. . . if us in the athletic department can make it a priority hopefully that trickles over to campus community and the larger community, you know. We can be leaders in how we're approaching this.

> As far as our student-athletes go, I know that some of them have things that they do through the academic center, where they get credit for going to certain things. And whether or not they can say, you know, hey, we would like you, this semester, to attend one diversity event or one educational session that falls into one of these categories. And I mean obviously, it still gives them a lot of leeway to choose what their comfort level is, but at the same time I feel like sometimes people have to be pushed a little bit to do things that they might not normally choose on their own. And that, that helps everyone learn and grow . . . finding ways to encourage staff to pursue some personal growth in things, and. I, I mean, I'm from the Midwest. I don't like to get too pushy with people but I also feel like saying, like this isn't exactly optional. We're not saying it's mandatory, but it's also like strongly, strongly, strongly encouraged.

Beyond encouraging or mandating attendance at LGBTQ trainings, participants also shared ideas about how these additional trainings should be structured. First, participants discussed the importance of these trainings being geared specifically for the unique context of athletics. Alice stated:

> And I will say they're good, it's good information that we're getting, I think it's matter of just how it's, how it's presented, maybe is. . . but to make it, you know, applicable to the group you're looking, you're, who's there. Specific, maybe athletic examples for certain things and scenarios that might be more in tune with us.

Additionally, participants spoke about the importance of having these trainings be focused and not too lengthy, as Alice further shared, "Maybe it's shorter. Maybe they're 45 minutes, and you can keep people's attention, 'Hey, guys this is going to be 30 minutes, 45 minutes so, stay with me for that long.'" Lisa and Jacob further discussed the need for these trainings to be annual and continuously offered:

> I think that it would be a good idea for each of the coaches to, have a yearly educational session on what that might look like. I also think that our administration, like I mentioned before, could do some education as well.

> I think it needs to be a continued education process . . . I just don't think one conversation is going to fix things. It's going to go one ear in one ear out, the other because it, it doesn't affect them personally, so they are not going to care, but like for me, it affects my life, and, and how comfortable and safe I feel so for me. That's going to mean a lot more than just a one-time deal where it's they're in human history. There are gay people, and it's like we, we know that? But like how do we make them feel more safe? How do we promote those conversations? How do we get people more educated that, like being gay, or being lesbian, or identifying as nonbinary or, or being trans, is not a choice. . . So, one conversation is not going to make them care. It has to be something kind of continued or kind of intensive.

Participants also wondered about having the trainings specifically geared toward student-athletes and coaches involved with men's sports, as illustrated by the following quotation from Grace:

> And men aren't as accepting, I guess, when it comes like to being athletes with maybe their teammates being LGBTQ, and I feel like a lot of that stems from just not being educated on it. So, I feel like just continuing the education and continuing to have those conversations around it will definitely help, I feel like more of the men's sports.

Finally, when discussing the need for additional trainings focused on improving individuals' knowledge about LGBTQ individuals and ways to promote LGBTQ inclusion, participants highlighted the importance of promoting trainings and resources that already exist on college campuses, including this example from Francis:

> The idea is that it would be provided in the information that goes out for our monthly staff meeting, as part of the agenda. Like, these are the events this month that you might, you know, we would encourage you to consider attending. And hopefully, if we can include it as part of our monthly staff meeting, getting Athletic Director behind that, and saying, hey, really, take a, go, go to this lunchtime thing, or check out this Zoom meeting or whatever.

Ultimately, this theme centered on participants' recommendations for the need to provide additional educational opportunities for members of the athletic department with the hope of increasing their ability to foster a more inclusive space for LGBTQ student-athletes and athletic department staff.

Increase Acceptance and Accountability Across the Athletic Department

Beyond additional opportunities to engage in training, participants also discussed the importance of increasing acceptance across the entire athletic department and felt that having more intentional conversations centered on sexual orientation and gender identity, in particular, would facilitate this greater acceptance. For example, Matt shared, "I think just talking about it honestly. Have an open conversation. Have a dialogue." Jacob highlighted the need "to have more conversations that bring all the different sports together" so that these conversations were not isolated among certain segments of the athletic department. Other participants focused on the need to have these conversations on an ongoing basis to increase acceptance for LGBTQ people across all aspects of the athletic department. For example, Kayla stated:

> I think that when we have like monthly staff meetings, it could be something we talk about, even like 10 minute or something, just once a month to know that we are all welcoming, or if there's anything someone has a problem, or question, or something like that, just making that open dialogue for the first, like 10 minutes of a meeting or something.

Still other participants discussed the importance of involving LGBTQ individuals in these conversations so others could learn from their lived experiences, as illustrated by Francis:

> And I think that until you have someone saying this is what happened to me, this is my experience, this is how it really feels to attend [university name] as a member of the LGBTQ community, or you know some other faction that's not the majority. That until people actually hear someone saying those things who's experiencing it, it's very hard to really feel like you know what's happening.

Beyond having conversations throughout the athletic department, participants also highlighted the importance of increasing coaches' involvement with efforts to create a more welcoming and inclusive climate for LGBTQ people. Participants particularly focused on how influential coaches are in shaping the climate and modeling inclusive actions to student-athletes. These participants felt it was important for coaches to actively lead efforts to promote LGBTQ inclusion, which is exemplified by this quotation from Darla:

> I would like to see more coaches thinking a lot about these things. But I would say, like they need to be more involved in like doing the training, leading trainings, leading conversations with their teams, because I think the admin can require everyone to attend the training and our staff can do things, but I feel like for the athletes, but to really see a change on like the team level I think it has to come from the coaches.

Other participants spoke about the importance of involving coaches in these efforts while also creating accountability structures that would encourage coaches to positively engage with efforts to promote greater LGBTQ inclusion, as demonstrated by Izzy:

> Because I think that student-athletes respond the best to, and they are most impacted by what their coaches say. And by like the language that their coaches use. So, if their coaches are using derogatory terms, I think that so often the student-athletes think that it's okay to use that too. And I think that they seem to be the people who they're most impacted by. And if a coaching culture is like, if a specific department, specific sports, coaches show that they won't accept that [derogatory speech towards LGBTQ people] I think, then, the student-athletes are more likely to be more understanding and consider it with what they say. So, I would love to see like coaches having to take like mandatory trainings and coaches having to make changes and more consequences if coaches are found to be using terms that that aren't okay, because I think right now the fallout for coaches is pretty much nothing as long as they're getting wins they can get away with saying anything they want.

Beyond influencing the behaviors of student-athletes, participants also thought coaches could influence each other as further exemplified by Izzy who said, "If maybe there's one coach who's like, particularly keen on the topic they could maybe convince the other coaches. . . but I think that that that could kind of help as well, potentially."

Participants further argued that it would be helpful to engage student-athletes in these efforts for LGBTQ inclusion with a focus on creating accountability structures that clearly communicate there is no tolerance for discriminatory behaviors, as illustrated by the following quotation from Emily:

> Comments aren't going to be tolerated again, so, you know, if someone makes a comment in the athletic training room then they get kicked out, that is, they need to leave. They can't say those things there. So, we can do that in our office. Coaches can do it in their practices. It's hard to say necessarily in the locker room, but that's where they would have to have captains and leaders within each team to make that, to stand up to their peers, which can be hard, obviously.

Overall, this second theme focused on participants' beliefs that LGBTQ inclusion involves engaging the entire athletic department in conversations, with a specific focus on coaches and student-athletes.

Shift to Action

The third theme emphasizes the importance of shifting from learning and talking about LGBTQ inclusion to a focus on preparing for and engaging in actions. Participants discussed the importance of having the athletic department take steps to shift into an action orientation, as shared by Hannah who stated, "But I do think more conversations and actually having them, not just saying, yeah, that sounds like

a great idea. And then the thought fizzles, we have to put pen to paper and have some action within it." Bethany explained that they want to see their athletic department take steps "to actually have change, show change." As a caveat to this call for change, participants wanted to see their athletic department do more than just ceremonial or surface level changes, or as Bethany went on to state, "Just a little more support, not just a bring you through the training, we're just, like I said, just checking boxes, so." This idea of not simply "checking boxes" was also expressed by Darla who said, "I think [athletic] admin needs to take a more active role in this, and not just like checking the box like we did the training and now we're done, but, being more like an intentional integration into the culture." Participants were invested in the athletic department doing more than just stating that diversity is important or that LGBTQ people are valued, but rather, seeking a commitment to action that moves beyond trainings and conversations.

Participants believed diversifying the athletic department employees was key to preparing to engage in actions, as illustrated by the below quotation from Otto:

> The more of a diverse population that we have within our department that will help attract a more diverse fan base. And those things, I think that's important to engage a lot of different diversities . . . I think conversations, you know, is, is the big thing opportunities within hiring. I make it clear I'm not into hiring somebody, just you know, from a diversity standpoint, just to hire that person. I still think at the end of the day we need to have the right person. But if the, the right person, you know, fits different diversities or demographics, and those things, I think there's great opportunities to encourage those, those platforms.

Emily shared that during the hiring process values and beliefs needed to be considered so that the athletic department is prepared to shift to an action orientation:

> I think the head coaches can have a big say in their, in the, the people they work with, like the assistant coaches underneath them, the graduate assistants. So, when they hire on making sure they accept, like the person that they're hiring has the same value [of LGBTQ inclusion].

Several participants focused on the hiring process as an important mechanism to assist the athletic department in moving beyond conversations to preparing for active engagement in creating a more welcoming and inclusive culture for LGBTQ student-athletes and athletic department employees. These participants believed that diversifying hiring and seeking candidates with a commitment to LGBTQ inclusion would serve as a catalyst for preparing athletic departments for greater action. Thus, the third theme was about athletic departments developing a commitment and engaging in a preparation for action to move beyond theorizing and discussions towards concrete steps, with the desired actions being described in themes four and five.

Increase Visibility of LGBTQ Inclusion

The fourth theme reflects actions that the participants perceive athletic departments could engage in to increase the visibility of LGBTQ inclusion with the

ultimate intent to improve the overall climate for LGBTQ student-athletes, coaches, and staff. For example, participants discussed the importance of athletic departments making overt, public statements about their support for LGBTQ people as shared by Peter who said, "Making it more well known, that we are accepting and that we are open, and that we are allies," and Nancy who explained "Athletics is gonna outwardly show their support for the LGBTQ community." Others elaborated further on this idea of a public statement of support as illustrated in the following quotations from Emily and Jacob:

> To have, like a public stance, or like decree of sportsmanship, and that athletics is not tolerated- doesn't tolerate any kind of hate comments to the LGBTQ community . . . I want them to partner with the athlete-ally, because that's what the [athletic conference] is doing. And then having a public presence of allyship, like on the campus, on the athletic page I think is like a minimum. The biggest thing is just having a public statement on the athletic page.

> The athletics department releasing something during pride month doing something with, I've seen other universities who during pride month they like, promote like you know, queer athletes that have come through their university, or queer staff members that are at the campus, or like things like that, because there are a lot of athletes that I recruit that I mean I feel like if I was to be able to show you like, hey, everybody is welcome here, then that might give me more opportunities to recruit more people.

In addition to making statements about LGBTQ inclusion on the official athletic department website and/or in public spaces, other participants discussed the idea of sharing statements or visuals on social media. This notion of using social media to increase the visibility of LGBTQ inclusion was expressed by Hannah when she stated:

> Even as small as what can we do as a [an athletic] department to support and celebrate those within the department that identify as that part of the [LGBTQ] community. And whether that's even on social media or can there be, you know the rainbow flag is part of, you know, in June . . . How can we combat that [discrimination] a little bit and show our support? I think it could be a lot stronger.

In addition to public statements, another idea that participants highlighted for increasing the visibility of LGBTQ inclusion was developing authentic relationships with campus and community LGBTQ organizations as illustrated by Timothy:

> Are there opportunities for us to build relationships with some LBGTQ organizations on campus and in the community? Because I think through that hopefully, I think that sends the message that the campus is accepting. It is inclusive. And not just on campus, but when it's within its athletics program as well. I think those are ways in which we can help, show that

> athletics is inclusive, and you hope to then trickles down to prospective student-athletes, who want to come to and they say, you know what? That is, a place that I can go, and I can be myself, and I can be accepted and have a good experience.

In this quote the participant is connecting increased visibility to more successful recruitment of future student-athletes. Other participants also wondered if having a visual statement in the form of a sticker or poster of allyship might be helpful for both the recruitment and retention of student-athletes. These ideas are encompassed in the following quotations from Calvin and Kayla:

> We would get the stickers and things like that, that we are allies. And, you know, maybe something more visual would be helpful. . . That would be, just show that you're an ally, or that it's a safe place. . . To have something visual is, when we have recruits coming to campus too, not knowing their orientation, and they're walking through our offices that might help.

> I feel like all of the athletic training staff have like stickers on their doors like this safe space and allied things. So, if you're just new here and don't know that then that's something you could see and know- Okay, I'm welcome here. And then, just if you're comfortable, casually throwing it in your conversations.

These quotations illustrate the role that increased visibility can play in creating a more welcoming and inclusive climate.

A final idea shared by participants to increase the visibility of LGBTQ inclusion was the athletic department hosting pride nights during athletic competitions as described by Emily and Bethany:

> I think it would be cool if we could have like some kind of pride night for athletes if a team wants it. And it not be like an outlier thing, like they all have the support of the other sports, even though they might not have necessarily the pride night.

> Our basketball team will wear, in warm ups they wear the "Walk with us" shirts or the, the fish shirts kind of showing just unity stuff, so. And to me that's no different than the LGBT, like LGBT awareness as well. I wish we would see more of that with the department. We've- had some of my coworkers have been at another school in the conference. . . It was like Pride Day, and so they had all rainbow warm ups.

Participants noted that hosting pride nights during athletic competitions could provide acknowledgement and validation to current LGBTQ student-athletes and employees in addition to assisting in recruitment efforts. Pride nights could also send a clear message to the public and fans about the values an athletic department holds about inclusion. This fourth theme provides a number of ideas for how athletic departments could intentionally increase the visibility of LGBTQ inclusion and ultimate improve the climate for LGBTQ student-athletes, coaches, and athletic department staff.

Develop Resources for LGBTQ Students Athletes and Employees

The fifth and final theme focuses on the need to create resources to support LGBTQ student-athletes and employees. Before exploring the specific resources that the participants were recommending, some participants discussed the general need for creating safe or welcoming spaces for LGBTQ student-athletes and colleagues. In particular, some of the participants shared the steps they were personally taking to foster safety and their hope that others would also take intentional steps toward creating LGBTQ safe spaces as explained by Grace and Kayla:

> Continuing to be a safe space and continue to educate yourself so that way your students feel safe enough to exist as they are . . . So, just making sure that we're always doing the work that needs to be done, whether it be like internally or externally, to make sure those students are safe. And then hold the people accountable who may not be making those, making a safe space for those students, whether it also be teammates, classmates, and you know other administrators and stuff, just making sure that everyone is welcoming and inviting.

> I let my team know pretty right away that, I'm a safe space for them. They can come to me for anything. So, I feel like just as a whole. If we can give that persona to our athletes and our coworkers that we're not going to judge them for anything that they come to us for it. This is a place that they can feel welcome at. And so, my dream would be for everyone to feel that presence like when they walk into anyone's office.

Adding to the idea of creating safe spaces, participants also discussed the need for safe and affirmative mental health supports for LGBTQ individuals within the athletic department as illustrated by Izzy:

> I think more advertisement around that [mental health services], and like, perhaps even like with a specific thing like if you are struggling with, and perhaps listing it so that it kind of like sparks like. So, if you're struggling, or if you are a member of the LGBT community and you need support. Please find it here. I think it would be useful to have things posted that, like students can physically see. Because I think sometimes, if you're struggling, it's hard to know where you can go to for it. . . And I think, like the psychologist, the psychiatrist could work to help make it a more open-inclusive like to make it clear that the students have somebody to go to.

Another resource identified by participants that could increase LGBTQ student-athletes' sense of inclusion and diminish isolation is creating an LGBTQ student organization within athletics or supporting an existing campus-wide organization that is intentionally welcoming of student-athletes. Participants described the importance of providing an LGBTQ student-athlete club in the following quotations from Bethany and Jacob:

> I think every NCAA school has, like FCAA, the Fellow Christian Athletes Association, which is great for them. They have a, a group, and want to connect with their God. I, I think it would be cool, because I, I know we

> have a number of LGBT members within the student-athletes that if they could have a group like that as well. . . I think, just a student organization can help a lot of kids. I mean, there's a lot of individuals who get into college that are probably still questioning their identity. And I think just, just for a mental health perspective to have something like that would help those individuals.

> In an ideal world I would love to see almost like a like a gay, straight alliance or some sort of organization that that is like an actual physical space for student-athletes to go to. I know that there are organizations like that across campus. I, I just knowing how a student-athlete thinks and what their mindset is. Every single day they do separate themselves from the normal student. So, I feel like having a group that is not specifically for student-athletes. I feel like it could be welcome to everybody, but it is geared a little bit more towards student-athlete life, . . .I would have loved to be able to feel like I'm welcomed and, and wanted on campus instead of it, just being by myself figuring things out by myself.

Other participants commented on how helpful it could be to student-athletes to facilitate their involvement in existing campus-wide student organizations, while also acknowledging the barriers, particularly around time, to student-athletes' involvement. For example, Darla stated:

> We struggle with getting our student-athletes involved across campus. They just have so much going on that they don't have, you know, opportunity to get involved as much as the general student population. So, I think, like having- I don't know, having more opportunities for students to get involved with like the, you know, the pride alliances on campus or, and not just LGBTQ, but different, different groups. . . I don't know if it would help to have like representatives come here and just make it location convenient, but I would love to see like instead of us just listing the resources, us actually like helping students get involved who want to be involved.

A final suggestion related to resources is the development of gender inclusive restrooms and locker rooms, which was explained by Lisa, "And then, if, if budget was like a non-issue, you know ideally, I would like to see some restrooms and locker rooms that our trans staff members or student-athletes could potentially use and feel most comfortable." This suggestion corresponds to changes that are already observed across university campuses as more and more colleges create gender inclusive restrooms in their campus buildings. In summary, this fifth theme highlights concrete resources that athletic departments could create to better support LGBTQ student-athletes and employees.

Discussion

The findings of this exploratory qualitative study provide concrete suggestions for creating a more welcoming college athletic department climate for LGBTQ

members that both reflect the existing literature and provide some new insights. In addition to addressing the research questions, participants' responses also illuminated some of the structural challenges and realities that are unique to the collegiate athletics context, including the incredible demands placed on student-athletes and coaches that create potential time constraints for both groups. Participants further noted the unique power that coaches and athletic department administrators have in shaping the culture within their teams and departments (Anderson et al., 2016; Toomey et al., 2018), as well as the need for accountability to exist beyond wins and losses during athletic competitions. These structural realities shape collegiate athletics and the processes for creating a more LGBTQ-inclusive climate, underscoring the importance of engaging the members of college athletic department to determine the steps that could enhance the climate for LGBTQ student-athletes and athletic department staff.

Mirroring the recommendations made by the NCAA, the primary and secondary education literature, and the educational intervention strategy of the Transformational Tapestry Model (Rankin & Reason, 2008), the participants in this study suggested annual trainings for all members of the athletic department to enhance individuals' understandings and awareness of LGBTQ identities and the barriers to inclusion (Fallon-Korb et al., 2025; Havey, 2021; Kavoura & Kokkonen, 2020; NASEM, 2019, 2020; NCAA, n.d.; O'Connell & Bottino, 2024). Beyond a general recommendation for continual education, the participants in this study focused on the need for trainings to include examples relevant to athletics, be concise and focused, and be incentivized or mandated. These suggestions reflect the aforementioned structural constraint of the restrictive time demands placed on student-athletes and athletic department employees. On the other hand, perceived challenges with mandating trainings are that requiring attendance can create a situation where participants are reluctant to engage with the material and/or may develop a more negative attitude about the trainings (Honnes, 2020; Peterson & McCleery, 2014). Yet, the desire to mandate trainings reflects participants' concerns that trainings on enhancing the climate for LGBTQ members would only become a priority and be attended if the trainings were required. The NCAA (n.d.) also recommends that athletic departments mandated trainings annually. Other participants suggested using incentives of free food and apparel, particularly for student-athletes, while still others thought some level of peer accountability among coaches could encourage them to attend. When implementing these trainings, athletic departments could utilize a variety of individuals to provide the trainings including university faculty members who research and teach about LGBTQ populations and/or community organizations who specialize in providing these types of training.

While perceiving the value of ongoing education, participants in this study further emphasized the need to shift from learning to actions that created a more welcoming and inclusive LGBTQ climate, similar to the symbolic actions intervention strategy of the Transformational Tapestry Model and the literature focused on care environments (Hudson & Bruce-Miller, 2023). Beyond highlighting the centrality of action, participants were aware of the need to take steps to prepare

for action with a focus on the hiring process and the need to hire coaches and athletic department staff who were committed to LGBTQ inclusion, mirroring the access and retention climate areas of the Transformational Tapestry Model and the focus on inclusive leadership practices in workplaces (Rankin & Reason, 2008; Robertson et al., 2024). The importance placed upon hiring reflects participants' awareness of the unique power that coaches and athletic department administrators have to shape and influence the culture within their teams and departments (Anderson et al., 2021; Mullin & Cook, 2021; Oswalt & Vargas, 2013; Toomey & McGeorge, 2018). Again, we see the Transformational Tapestry Model reflected in these findings through the idea that transformation of any kind is largely about action.

Further recommendations from participants focused on increasing visibility of LGBTQ inclusion through public statements, social media, and events like pride nights at athletic competitions. These suggestions were about communicating a commitment to LGBTQ inclusion both to an audience within the athletic department as well as outside contingencies, such as fans and potential student recruits. This suggestion also mirrors the existing recommendations from the NCAA (n.d.) that focus on the importance of media and other official communications from athletic departments being LGBTQ inclusive. This set of findings reflects a difference between the school-based literature and the context of collegiate athletics as the school-based literature focuses solely on internal constituents (i.e., students and school personnel), while creating an LGBTQ-inclusive climate in college athletics requires involvement of external groups as well. For example, Melton (2021) discusses incidents of fans chanting anti-LGBTQ slurs during sporting events. Incidents such as theses underscores the importance of athletic departments making public statements clearly situating their commitment to LGBTQ inclusivity (Melton et al., 2023). Yet, we encourage departments to adopt a comprehensive collection of recommendations as a coordinated effort to promote LGBTQ inclusion rather than solely adopt symbolic public statements without action (Levi & Fried, 2024).

The final set of recommendations focuses on resources for LGBTQ student-athletes and employees, which is corroborated by the NCAA and the primary and secondary school-based literature (Griffin & Taylor, 2013; NASEM, 2019, 2020; NCAA, n.d.; Russell et al. 2021). Participants spoke about the importance of creating intentional LGBTQ safe spaces within athletic departments to foster greater inclusion. Research within the general college populations suggests that having designated LGBTQ safe spaces fostered an increase in students' sense of safety and connectedness (Evans, 2002; Katz et al., 2016), similar to the findings in the care context literature focused on creating safe interpersonal relationships to foster LGBTQ inclusion (Hudson & Bruce-Miller, 2023). Moreover, participants discussed the importance of having LGBTQ affirming mental health resources, which is particularly important given that research has found that LGBTQ student-athletes often experience heightened mental health concerns, which are frequently connected to the discrimination and harassment they face (Klein et al., 2019; Kroshus & Davoren, 2016; Rankin & Merson, 2012). Finally, participants discussed the importance of athletic departments creating or supporting LGBTQ student organizations geared

toward student-athletes. This suggestion directly reflects the school-based literature highlighting the benefits for LGBTQ students and also for entire schools when GSAs are offered (Ioverno & Russell, 2020; Kosciw et al., 2016; Marx & Kettrey, 2016) and employee resources groups (Robertson et al., 2024). Creating LGBTQ student-athlete organizations could be particularly central to an LGBTQ-inclusive climate given the research highlighting the isolation and exclusion that LGBTQ student-athletes frequently report (Anderson et al., 2019; Pfeiffer & Misawa, 2018; Rankin & Merson, 2012).

Limitations and Suggestions for Future Research

Although this exploratory study offers some potentially novel insights into mechanism for creating climates in athletic departments that are more affirming and inclusive of LGBTQ student-athletes and employees, as with any study there are limitations. The goal of qualitative research is not to recruit representative samples; however, the participants for this study were primarily White, heterosexual, and athletic department employees. Future researchers need to recruit a more racial and LGBTQ diverse samples to explore how the intersection of race and LGBTQ identities might influence participants' perspectives on the steps athletic departments can take to be more inclusive. The inclusion of LGBTQ individuals is essential to ensuring that recommendations for creating a more welcoming athletic department are actually useful; thus, a future study could involve asking LGBTQ student-athletes and athletic department employees their perceptions of the recommendations found in this study. Additionally, researchers might want to replicate this study with a sample primarily comprised of student-athletes to explore how the findings might vary, as the present study's sample included only one student. Moreover, it is difficult to discern how collecting data from a particular athletic department within a singular location impacted the findings of this study. Future research could explore how geography (i.e., the Midwest versus elsewhere), university type (e.g., public university versus private), and divisional level (e.g., Division I versus Division III) might influence the steps identified for creating a more LGBTQ affirming athletic department.

Conclusion

The findings of this study provide important insights for creating more inclusive and welcoming spaces for LGBTQ individuals in collegiate athletic departments. In particular, the findings suggest that continual education opportunities, as well as intentional and honest conversations are foundational to facilitating LGBTQ inclusion. The data for this study further suggest that athletic departments need to move beyond providing opportunities for dialogue and education to committed actions that increases visibility of LGBTQ inclusion through public statements, social media, and events (e.g., pride nights). Finally, collegiate athletic departments need to develop supportive resources for LGBTQ student-athletes and athletic department staff. These findings provide a framework for greater inclusion and seek to diminish the presence and influence of anti-LGBTQ harassment and bias.

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Figure 1

Examples of the Coding Process Used for this Study

Data Examples	Open Codes	Consensus Understanding	Theme
"I think just talking about it honestly. Have an open conversation. Have a dialogue." (Matt)	More conversations Having conversations	Increasing acceptance across the entire athletic department can be achieved by having more intentional conversations centered on sexual orientation and gender identity.	**Final Theme:** *Increase Acceptance and Accountability Across the Athletic Department* Increasing acceptance across the entire athletic department can be achieved by having more intentional conversations centered on sexual orientation and gender identity and creating accountability structures to ensure ongoing discussion and learning.
"I think that when we have like monthly staff meetings, it could be something we talk about…to know that we are all welcoming… just making that open dialogue..." (Kayla)	Find ways for folks to share personal experience More voices Admin accountability	Need to have these conversations on an ongoing basis and integrate them into existing accountability structures.	
"And I think that until you have someone saying this is what happened to me, this is my experience, this is how it really feels to attend [university name] as a member of the LGBTQ community…That until people actually hear someone saying those things who's experiencing it, it's very hard to really feel like you know what's happening." (Francis)	Find ways for folks to share personal experience Opportunities to hear about experiences of LGBTQ people	Important to involve LGBTQ individuals in these conversations so others could learn from their lived experiences.	
"I would like to see more coaches thinking a lot about these things…they need to be more involved in like doing the training, leading trainings, leading conversations with their teams..." (Darla)	Increased coach involvement–because they are influential Coach accountability	Coaches are influential in shaping the climate and modeling inclusive actions to student-athletes, making it important for them to actively lead efforts to promote LGBTQ inclusion.	

"…I think that student-athletes respond the best to, and they are most impacted by what their coaches say…And if…coaches show that they won't accept [derogatory speech towards LGBTQ people] I think, then, the student-athletes are more likely to be more understanding and consider it with what they say. So, I would love to see like coaches having to take like mandatory trainings and coaches having to make changes and more consequences if coaches are found to be using terms that that aren't okay..." (Izzy)	Accountability for coaches	Due to their influence, creating accountability structures that would encourage coaches to positively engage with efforts to promote greater LGBTQ inclusion.
	Coach accountability	
	Coaches should take trainings	
"Comments…aren't going to be tolerated… so, if someone makes a comment in the athletic training room then they get kicked out, that is, they need to leave. They can't say those things there. So, we can do that in our office. Coaches can do it in their practices… Because each leader, each kind of group, has their own leading person, but it can go down to the individual as long as they like commit to a change. Not necessarily everyone has to change, but just- hopefully everyone sees it as an important issue." (Emily)	Not tolerating discrimination	Creating accountability structures that clearly communicate there is no tolerance for discriminatory behaviors.
	Accountability for student athletes	
	Creating accountability structures	

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College Athlete Resilience: Achieving Mental Wellbeing During a Pandemic

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The long-term negative impact of the COVID-19 pandemic on mental health outcomes among college athletes has been well-established. However, mental wellbeing in this population remains understudied. Guided by the conceptual framework of sport resilience, this study examined the impact of COVID-19 on mental wellbeing among NCAA Division I college athletes and, more specifically, the moderation effect of resilience on the relationship between COVID-19 and mental wellbeing. Among college athletics, resilience is believed to not only mitigate mental health concerns but may also promote mental wellbeing. Findings revealed a significant and negative correlation between COVID-19 and mental wellbeing, as well as a positive relationship between resilience and mental wellbeing. Further, resilience was found to significantly moderate the relationship between the impact of COVID-19 and mental wellbeing. Regardless of the impact level of COVID-19, college athletes with high levels of resilience consistently reported greater mental wellbeing than those with medium or low levels of resilience. Although prior research has clearly demonstrated the negative impact of the pandemic on mental health, findings from the current study illustrate the positive influence of resilience. Given the likelihood of future public health pandemics (e.g., avian influenza, measles) and ongoing changes to federal food safety policies—we believe that this study highlights the importance of resilience in navigating challenging circumstances.

Keywords: student-athlete, mental health, holistic health

With nearly 500,000 youth and young adults competing in National Collegiate Athletic Association (NCAA) collegiate athletics, there is growing recognition of the unique mental health concerns, challenges, and needs among college athletes (Brown, 2014; Morris et al., 2020). In fact, college athletes—in comparison to their nonathlete peers—are known to be at greater risk for anxiety, depression, and

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other mental health diagnoses (Putukian, 2016; Ryan et al., 2018). This greater susceptibility is due, in part, to unique pressures and stressors that confront athletes (Moore & Gummelt, 2019). Athlete-specific risk factors include physical and psychological demands of competition, rigorous training and travel schedules, time requirements for both athletics and academics, as well as social and media pressure (Cosh & Tully, 2013; Martin et al., 2010). The culmination of such athlete-specific risk factors, in combination with mental health stigma, has contributed to, among other outcomes, a rise in deaths by suicide among college athletes (Bock, 2024). Given this reality, public attention, often through athlete advocacy, has begun to highlight the importance of adequate and accessible mental health services. Indeed, professional and college athletes—such as Michael Phelps (Jackson et al., 2022) and DJ Carlton (Cassilo & Kluch, 2023)—have utilized their social platforms to advocate for mental health awareness, literacy, and services.

Even in the years that followed, the COVID-19 pandemic has continued to disrupt and impact the lives of college athletes (NCAA, 2023). For instance, during the first competitive season following national lockdowns, college athletes reported that COVID-19 not only impacted their mental and physical health, but pandemic experiences were found to be significantly associated with continued psychological distress (Newman et al., 2023). Self-published reports by the NCAA (2022, 2023) further suggest that rates of mental health concerns (e.g., mental exhaustion) have seen little improvement since the height of the pandemic, with some forms of psychological distress (e.g., feeling overwhelmed) having remained 1.5 to 2 times higher than pre-pandemic levels (NCAA, 2022, 2023). Less examined among college athletes, however, is the strength-based construct of positive health outcomes. Given the release of the NCAA Sport Science Institute's (2024) consensus document that outlined mental health best practices, the first of which is *creating healthy environments that support mental health and promote wellbeing*, attention must also be afforded to positive mental health and wellbeing.

Consistently associated with mental wellbeing (Schultze-Lutter et al., 2016), resilience has recently been characterized as "the outcome of wellbeing maintenance despite threats to that wellbeing" (Waugh & Sali, 2023, p. 1). In this sense, resilience is conceptualized as the innate ability to withstand, adapt, and bounce back from experiencing adversity. This understanding of resilience emphasizes its ability concerning both enduring adversity and restoring mental wellbeing. Within collegiate athletics, research has provided initial support for the relationship between resilience and mental health-related constructs. Drew and Matthews (2019), for instance, demonstrated that college athletes with relatively higher resilience scores were associated with lower levels of symptoms related to depression and/or anxiety. Related specifically to college athlete mental wellbeing, several intervention studies have been conducted and yielded promising results. For example, Kuchar et al. (2023) examined the impact of the Resilience and Enhancement in Sport, Exercise, & Training (RESET) program and found college athletes not only learned to respond to setbacks appropriately, but these athletes also experienced reduced levels of depression, anxiety, and stress. There is, however, a dearth of research examining the

effect of resilience on mental wellbeing among college athletes. Thus, the purpose of the current study is to examine the impact of COVID-19 on mental wellbeing and, in turn, the moderation effect of resilience.

Literature Review

COVID-19 and College Athlete Mental Health

Since its global onset, the COVID-19 pandemic of 2020 has been recognized as a public health emergency and a major traumatic event for many. Experiencing a life-altering event not only impacts the immediate livelihood of an individual, but such an event can continue to have a long-term influence on one's life (Hancheva, 2021). For instance, traumatic events have the capability to affect not only economic welfare but also the safety, physical health, and mental health of individuals and entire communities (Morganstein & Ursano, 2020). In fact, experiencing a traumatic event, such as COVID-19, has been shown to alter the brain structure and functioning in young adults (Choi et al., 2019; Park et al., 2020). In turn, research has further demonstrated that traumatic experiences can lead to specific mental health diagnoses, such as generalized anxiety disorder, major depressive disorder, and post-traumatic stress disorder (Cavicchioli et al., 2021; Cénat et al., 2021).

The effect of COVID-19 may have been uniquely disruptive for college athletes who were confronted with facility closures, competition cancellations, training modifications, travel restrictions. As a result, college athletes were left feeling uncertain about their future, which led to increased feelings of anger and depression (Ahmad et al., 2024; Hussain et al., 2023). Further, stay-at-home mandates forced college athletes to lose their network of social support, which further adversely affected their mental health (Graupensperger et al., 2020). The sudden loss of sport and, in turn, the abandonment of a major component of their personal identity, was found to be emblematic of the grief experienced when losing a loved one (Economou et al., 2021; Knowles et al., 2021). Even when athletic competitions resumed, college athletes indicated that their social life and mental health were most continuously negatively impacted by COVID-19 (Newman et al., 2023).

Although the height of the pandemic may have passed, there remains worry regarding the continued and long-term effects on the mental health of college athletes. In fact, some scholars (e.g., Economou et al., 2021) have advocated for future caution, as college athletes may experience a delayed onset of mental health challenges because of the pandemic. Such a continuous negative effect is particularly concerning, given that one in seven college athletes has reported a lifetime prevalence of at least one mental health diagnosis (Sarac et al., 2018). However, as research continues to provide an understanding of the impact of COVID-19 on mental health, helping to better prepare for potential future global adversarial events, there is also a need to progress from a traditional deficit-based medical model to embrace a strengths-based approach to positive mental health. In this way, rather than solely examining outcomes related to depression, anxiety, and stress (e.g., Newman et al., 2023), research should more thoroughly examine outcomes and mechanisms of positive mental health.

Mental Wellbeing and Resilience

As a construct, mental wellbeing is often culturally dependent and can be traced back to ancient Greek society (Jarden & Roache, 2023). Ruggeri et al. (2020), however, underscored the multidimensional and intersectional nature of mental wellbeing and proposed the construct encompasses

> the combination of feeling good and functioning well; the experience of positive emotions such as happiness and contentment, as well as the development of one's potential; having some control over one's life; having a sense of purpose; and experiencing positive relationships. (p. 1)

More simply, mental wellbeing is regarded as a sustainable condition that enables an individual, population, and/or community to develop and thrive. When mental health is conceptualized as a continuum, mental wellbeing and mental illness are positioned at opposite ends as distinct yet interconnected dimensions (Keyes, 2002). In this two-continua model, positive mental health is recognized as a complete state of mental wellbeing, whereas mental illness (as a clinical disorder) is particularly focused on pathologies that affect cognition, emotional regulation, and overall functioning (Westerhof & Keyes, 2010) and is representative of poor mental health.

College athlete research has readily demonstrated a significant correlation exists between challenges associated with exposure to traumatic events and psychological stress, an antecedent and indicator of poor mental health (e.g., Beasley et al., 2020; Newman et al., 2023). For instance, among 91 NCAA Division III college athletes from one university, survey results revealed a negative correlation between worrying about the COVID-19 pandemic and mental wellbeing (Watts et al., 2022). However, there is a notable lack of research focusing on positive mental health outcomes as the complete state on the continuum of mental wellbeing.

Considered a potential predictor of mental wellbeing, resilience has been defined as the ability to withstand, adapt, or rebound after being confronted with adversity that threatens functioning, viability, or development (Masten, 2001; Masten et al., 2021). Due to the unique pressures and stressors that confront college athletes (e.g., physical and psychological demands, time commitments, social pressures), resilience may be particularly important for this unique population. Indeed, several studies have suggested that resilience significantly affects the relationship between organizational stress and mental burnout among college athletes (Wagstaff et al., 2018; Wu et al., 2022). Research has also demonstrated that characteristics of resilience (e.g., emotional regulation, managing stress) may contribute to mitigating negative mental outcomes following exposure to traumatic events (Chandler et al., 2020). In fact, intervention research examining the effectiveness of resilience training has shown promising results, with college athletes having an increased likelihood of using coping strategies to manage stress from sport and academic responsibilities (Sullivan et al., 2023). On the other hand, in a study with 253 Norwegian college athletes (ages 10 – 20.5), resilience has been found to be positively correlated to physical, psychological, and social wellbeing (Martin et al., 2021). In other words, resilience may not only mitigate poor mental health but also serve as a potential predictor of mental wellbeing (i.e., positive mental health).

Conceptual Framework

To better understand the relationship between resilience and positive mental wellbeing, this study was guided by the conceptual framework of sport resilience (Galli & Vealey, 2008). When athletes encounter adversity in sport, such experiences can produce a range of lasting negative effects, including emotional distress and psychological struggles (McLoughlin et al., 2021). Drawing upon Richardson et al.'s (1990) resiliency model, the conceptual framework of sport resilience posits that components of resilience—particularly timely and appropriate social support, as well as cognitive and behavioral coping strategies—can interact with the disruption caused by adversity to facilitate positive psychological outcomes, such as personal growth, improved perspective, and enhanced mental wellbeing (Galli & Vealey, 2008).

Richardson et al.'s (1990) resiliency model suggests that resilience begins with a state of biopsychospiritual homeostasis, wherein individuals experience a balanced physical, psychological, and spiritual state. However, this equilibrium is frequently challenged by stressors and traumatic events. When significant adversity disrupts this homeostasis, individuals are compelled to restore homeostasis by utilizing resilience components (e.g., personal and social resources). The conceptual framework of sport identifies several resilience components—such as social support, passion for sport, emotional regulation, and coping skills—as mechanisms through which athletes can bounce back from adverse experiences in sport (Galli & Vealey, 2008).

Furthermore, the conceptual framework of sport resilience acknowledges that reintegration following adversity does not always result in positive outcomes. Three potential outcomes are proposed: reintegration with loss, homeostatic reintegration, and resilient reintegration (Galli & Vealey, 2008). Reintegration with loss occurs when individuals survive adversity but lose protective factors in the process. Homeostatic reintegration involves a return to the previous level of functioning without significant gain or loss. In contrast, resilient reintegration refers to growth beyond the pre-adversity state, characterized by the acquisition of new or strengthened protective factors, ultimately contributing to improved mental wellbeing (Galli & Vealey, 2008). According to the conceptual framework of sport resilience, athlete resilience might mitigate the negative impact of traumatic or adversarial events on mental wellbeing outcomes. That is, theoretically, resilience may moderate the relationship between experiences of psychological stress and mental wellbeing. Among college athletes, empirical research examining the moderating role of resilience on positive wellbeing outcomes after traumatic events is warranted.

Study Purpose

Resilience among college athletes and other elite athletes has been recognized as a growing topic of interest over the last decade (Bryan et al., 2019; Gupta & McCarthy, 2024). Resilience has been found to be a prerequisite for elite sport participation (Westmattelmann et al., 2021) and a predictor of perceived athletic performance (Chrétien et al., 2024). Yet, from a strengths-based perspective (Zimmerman, 2013), how resilience moderates the effect of a traumatic event on mental wellbeing—as a

positive mental health outcome—has yet to be fully established. The purpose of this study is two-fold: (a) examine the impact of COVID-19 on mental wellbeing; and (b) examine the moderation effect of resilience on the relationship between COVID-19 and mental wellbeing among college athletes.

Method

Procedure and Participants

After obtaining ethical approval, college athletes from nine universities within an athletic conference in the northeast region of the United States were recruited via email. Upon providing consent, participants completed an online survey during the fall of 2020. Among the 368 college athletes who provided consent, 42 participants were removed due to entirely missing data (i.e., participants did not respond to the survey), and 104 participants were excluded due to complete missing data on one or more scales measuring the independent or dependent variables. The final sample was comprised of 222 NCAA college athletes, constituting approximately 5% to 10% of the total college athletes from the nine conference universities.

Participants were, on average, 21 years of age (SD = 1.3) and the majority identified as being white (n = 170, 76.6%) and women (n = 164, 73.9%). Among athletes of color (n = 51, 23.0%), the largest unique population self-identified as multiracial (n = 25, 11.3%), followed by Black (n = 13, 6.0%). All nine participating schools were represented, with proportions ranging from 22.5% (n = 50) to 3.6% (n = 8). Most participants (n = 209, 94.1%) were in their first four years of undergraduate study, with 26.6% in their first year and 25.7% in their second year. The majority (n = 142, 65.7%) had experience in more than one NCAA season. Track and field had the highest participant count (n = 53; 23.9%), followed by swimming and diving (n = 32; 14.4%), soccer (n = 26, 11.7%), lacrosse (n = 23, 10.4%), and cross-country (n = 22; 10.0%). See Table 1 for additional information.

Measurement Instruments

An online survey was created to examine the impact of the COVID-19 pandemic on the mental health of college athletes. The first part of the survey collected participant sociodemographic characteristics and sport experiences. Further, guided by the conceptual framework of sport resilience, the survey employed three scales to assess the relationships between traumatic event (independent variable), wellbeing (dependent variable), and resilience (moderator).

The 15-item Impact of Event Scale for COVID-19 (IES-COVID-19) was used to measure the traumatic stress symptoms due to the pandemic (Vanaken et al., 2020). Participants were invited to indicate how much the statements applied to them during the last four weeks. Example statements included “Regarding the situation related to COVID-19, I thought about it when I didn’t mean to.” and “Regarding the situation related to COVID-19, I stayed away from things that made me think about it.” A five-point scale was used to rate each item, spanning from 0 (not at all) to 4 (extremely). Higher scores indicated more significant impacts of the pandemic on the individual.

Table 1

Demographics for College Athlete Participants

	N = 222	
Variable	***n***	***%***
Gender		
Woman	164	73.9
Man	56	25.20
Genderqueer	1	0.50
Intersex	1	28.30
Race/ethnicity (*n* = 216)		
White	170	76.60
Multiracial	25	11.30
Black	13	5.90
Hispanic or Latinx	10	4.50
Asian	2	0.90
Native American or Alaskan Native	1	0.50
Academic Class Standing		
Freshman	59	26.60
Sophomore	57	25.70
Junior	56	25.20
Senior	37	16.70
Fifth+	7	3.20
Grads	6	2.70
NCAA Sports		
Track and Field	53	23.90
Swimming and Diving	32	14.40
Soccer	26	11.70
Lacross	23	10.40
Cross-Country	22	10.00
Other	66	29.73
NCAA Seasons (*n* = 216)		
First	74	33.30
Second	60	27.00
Third +	82	37.96
Age (*n* = 216)	***Mean***	***SD***
	21	1.29

The validation of IES-COVID-19 was conducted among university students and indicated acceptable internal consistency (α = .75; Vanaken et al., 2020). Cronbach's alpha for this study participants was .89, indicating good reliability.

The Brief Resilience Scale (BRS) was used to measure the capacity to rebound following undergoing adverse experiences (Smith et al., 2008). This scale consists of six items, with every other item being reverse-coded. Example questions included "How much do you agree that I tend to bounce back quickly after hard times?" and "How much do you agree that I have a hard time making it through stressful events?" A five-point scale was used to rate each item, spanning from 1(strongly disagree) to 5 (strongly agree). Scores for negatively coded items were reversed, ranging from 5 (strongly disagree) to 1 (strongly agree). Validation analysis of the BRS with two college student samples demonstrated the scale's high reliability ($\alpha_1 = .84$; $\alpha_2 = .87$) and a unitary construct predictability associated with personal characteristics (Smith et al., 2008). In this study, Cronbach's alpha was 0.86, indicating good reliability.

The Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWS) was used to measure mental wellbeing as a positive mental health outcome (Tennant et al., 2007; McKay & Andretta, 2017). The short version of the scale has seven items. Participants were invited to indicate how much the statements applied to them during the last four weeks. Example statements included "I've been feeling optimistic about the future." and "I've been feeling close to other people." A five-point scale was used to score each item, ranging from 1 (none of the time) to 5 (all of the time). Higher scores reflect a more positive affect, fulfilling interpersonal relationships, and positive functioning (Tennant et al., 2007). The SWEMWS was validated among youth participants (aged 13 – 24) and results suggested acceptable internal consistency (α = .78; McKay & Andretta, 2017). Cronbach's alpha for this study was 0.88, indicating good reliability.

Data Analyses

Upon preparing the dataset, the analytical process was comprised of two phases. Preliminary analyses were used to address the data's missing patterns, perform missing value imputation, and verify assumptions for regression models. Linear regression analyses were conducted to first examine the impact of COVID-19 on mental wellbeing. Finally, the moderation effect of resilience on the relationship between the impact of COVID-19 and mental wellbeing is examined. All analyses were conducted using IBM SPSS version 28.

A priori power analyses were conducted using the G*Power (Faul et al., 2009). The analysis indicated that, for linear multiple regression with three parameters (i.e., IES-COVID-19, resilience, and the interaction), a sample size of 202 participants would be required to detect a significant effect at a p-value of .05, a power of .80, and a small-medium effect size of $f^2 = .05$. Thus, the sample size for this study was deemed efficient.

Preliminary Analyses

Proportions and patterns of missing data for all three psychometric scales were assessed. The percentage of missing values per item fell between 0 and 1% (i.e., 0 to 2 missing values). Additionally, nonsignificant Little's missing test suggested data was missing completely at random. Consequently, multiple imputation was selected to treat missing values (Schlomer et al., 2010). Missing values for sociodemographic variables were not imputed. Following data imputation, Kolmogorov-Smirnova tests of normality were performed for the composite scores of independent, dependent, and mediator variables. All test results were significant ($p < .05$), suggesting a normal distribution of the data (George & Mallery, 2018).

Moreover, underlying assumptions for linear regression and moderation analyses were verified. These assumptions included continuous dependent variables, independence of the relationship between the dependent and independent variable, a linear relationship between the dependent and independent variable, normal distribution of residuals, homoscedasticity, absence of outliers, and multicollinearity. Particularly for assessing the linear relationship, Ordinary Least Squares linear regression analyses were conducted to examine the bivariate associations between the impact of COVID-19, resilience, and mental wellbeing. Potential extreme values were examined using Mahalanobis distance, Cook's distance, and Leverage point. A data point was considered an outlier if it did not meet two or more cutoff points. Overall, no outlying values were observed. All assumptions were deemed met.

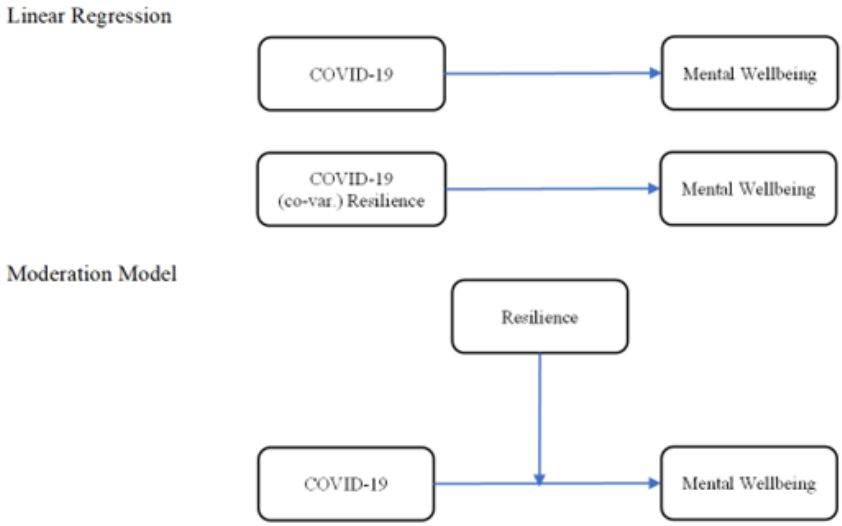
Main Analyses

The moderation analysis was conducted using the PROCESS version 4.3 for SPSS specifically. It is noteworthy that, unlike conventional regression analyses, PROCESS provides an output that includes the interaction of predictor and the moderator in the statistical model, along with the constant (Hayes, 2017). First, linear regression analysis was conducted to examine the impact of COVID-19 on mental wellbeing. Upon detecting significant bivariate linear association, a moderation model was developed. In the moderation model, the impact of COVID-19 served as the independent predictor. Resilience served as the moderator and mental wellbeing was the dependent variable. All variables in the model were standardized (see Figure 1 for model information).

Results

Regarding the impact of COVID-19, participants reported an average score of 21.76 ($SD = 11.37$) out of a possible score of 60. On average, the event of COVID-19 pandemic had a modest impact on college athletes. Additionally, participants reported an average score of 19.68 ($SD = 4.86$) out of a possible score of 30 for resilience and an average score of 20.55 ($SD = 5.25$) out of a possible score of 35 for mental wellbeing. Both average scores exceeded the midpoint (15 and 17.5, respectively) of the potential score range, indicating that, on average, college athletes rated their levels of resilience and mental wellbeing favorably.

Figure 1
Regression Models



Linear regression revealed a negative correlation between the impact of COVID-19 and mental wellbeing, such that as the severity of COVID-19 impact increased, overall mental wellbeing decreased (β = -0.328, F[1, 220] = 26.588, p < .001). Higher resilience scores were positively associated with enhanced mental wellbeing (β = 0.559, F[1, 215] = 97.944, p < .001). Notably, when controlling for resilience, the impact of COVID-19 remained significantly and negatively correlated with mental wellbeing (β = -0.240, F[1, 215] = 62.63, p < 0.001, ΔR^2 = 0.56, p < .001).

In the moderation model, the impact of COVID-19 positively and significantly predicted mental wellbeing among college athletes (β = 0.209, 95% CI [.0031; .4140], p = .047). Additionally, the interaction effect of the impact of COVID-19 and resilience on mental wellbeing was negative and significant (β = -0.016, 95% CI [-.0256; -.0060], p < .01). At a low moderation level of resilience ($Low_{resilience}$ = 14.88), the relationship between the impact of COVID-19 and mental wellbeing was nonsignificant (β = -0.026, 95% CI [-.0988; .0471], p = .486). At a moderate level of resilience ($Medium_{resilience}$ = 20.00), the impact of COVID-19 had a relatively moderate influence on mental wellbeing (β = -0.107, 95% CI [-.1562; -.0569], p < .001). At a high level of resilience ($High_{resilience}$ = 24.00), the impact of COVID-19 had relatively high influence on mental wellbeing (β = -0.170, 95% CI [-.2306; -.1085], p < .001; see Figure 2). Overall, the moderation model explained 39.76% of the variance in mental wellbeing (F[3, 213] = 46.869, p < .001; see Table 2).

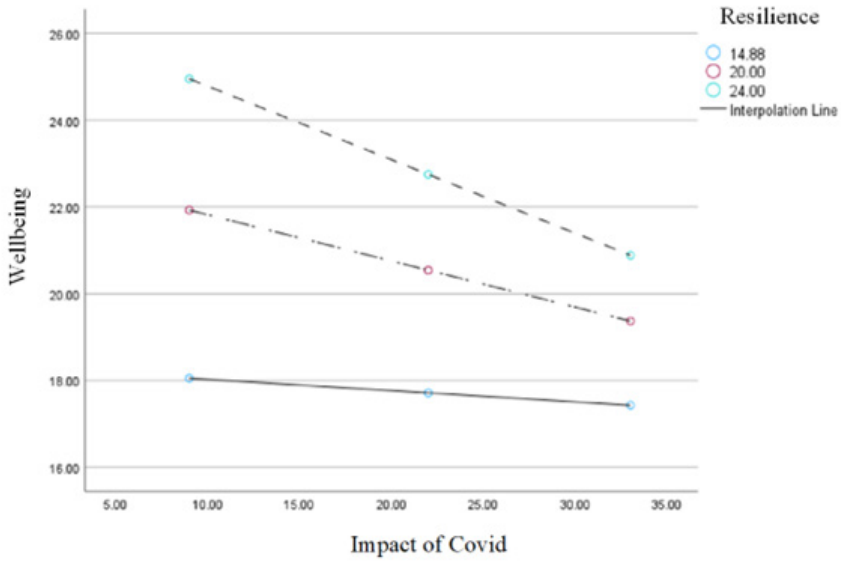
Table 2

Summary of Mediation Models (n = 217)

	β	*SE*	*t*	LLCI	ULCI
Impact of COVID-19 on mental wellbeing					
	0.2086	0.1042	2.0014*	0.0031	0.414
Resilience on mental wellbeing					
	0.8987	0.1198	7.5034***	0.6626	1.1348
Interaction effect on mental wellbeing					
	-0.0158	0.005	-3.1699**	-0.0256	-0.0060
Overall model	R^2	*SE*	*F*		
	0.3967	17.1542	46.8687***		

Note: $*p < 0.05$ $**p < 0.01$ $***p < 0.001$.

Figure 2
Moderation



Discussion

College athletes are confronted with unique mental health challenges, including physical and psychological risk factors. Not only are college athletes at seemingly greater risk for experiencing mental health concerns, but the traumatic stress caused by the COVID-19 pandemic has led to increased reports of mental health (Johnson, 2022). However, college athlete research has traditionally focused on negative mental health outcomes (e.g., Newman et al., 2023) and neglected to examine positive mental health outcomes, such as wellbeing. Taking a strength-based approach to mental wellbeing serves college athletes by better positioning them for potential future public health pandemics (e.g., avian influenza, measles). The purpose of this study was to examine the impact of COVID-19 on mental wellbeing, as well as examine the moderation effect of resilience on the relationship between COVID-19 and mental wellbeing. Overall, participants reported low levels of traumatic stress related to the pandemic and moderate levels of both resilience and mental wellbeing. In support of the existing literature related to resilience in sport, this study found that there was a statistically significant negative relationship between pandemic stress and wellbeing, with resilience being positively related to wellbeing. Finally, resilience was found to be a significant moderator of the relationship between college athlete wellbeing and traumatic stress.

The significance of a strength-based perspective that emphasizes positive mental health outcomes has been increasingly recognized by both sport psychologists (Gordon & Gucciardi, 2011; Wagstaff & Leach, 2015) and social workers, particularly within the emerging field of sport social work (Newman et al., 2022). At its core, a strengths-based perspective emphasizes the fundamental belief that every individual possesses unique strengths and assets and, in turn, the potential to overcome challenges and improve their quality of life (Benard, 2005). In alignment with Zimmerman's resiliency theory (2013) that emphasizes the strength-based perspective in resilience research, the conceptual framework of sport resilience (Galli & Vealey, 2008) and broader psychological literature (e.g., Hunsu et al., 2023; Sarkar & Fletcher, 2014) have identified a variety of strength-based contextual, social, and individual factors—such as social support, passion for sport, and effective coping strategies—that serve to mitigate the negative impact of traumatic experiences and psychological stress, thereby promoting positive mental wellbeing outcomes. This study contributes to the evolving conceptualization of resilience by emphasizing its moderating role in enhancing athletes' wellbeing and offers empirical support for the theoretical linkage proposed in the conceptual framework of sport resilience between adversity and positive mental wellbeing through the mechanism of resilience.

Across the world, the pandemic has continued to significantly impact mental health concerns and needs (Ettman et al., 2020; Twenge & Joiner, 2020), resulting in increased symptoms of traumatic stress. The present study found that, regardless of

individual resilience levels, the COVID-19 pandemic had an adverse impact on the mental wellbeing of all college athletes. However, findings also suggest that college athletes, in general, reported low levels of pandemic-related stress. This is somewhat surprising given prior research has clearly demonstrated that the pandemic has led and continues to lead to increased rates of depression, anxiety, and mental exhaustion among college athletes (Economou et al., 2021; Johnson, 2022).

Previous research has posited that participating in organized sport may lead to greater mental wellbeing and mental performance factors, like resilience, due to the structured environment, social support, and opportunities these programs provide for skill development (Westmattelmann et al., 2021). As such, compared to the general population, athletes tend to possess higher levels of resilience and the ability to adapt to adversity (Chrétien et al., 2024). Similar findings were highlighted in this study, with athletes having reported moderate levels of resilience. To this end, a relatively high level of wellbeing was found to be significantly associated with higher levels of resilience. This study supports the role of sport as a meaningful context for fostering resilience and ultimately promoting mental wellbeing, emphasizing the potential of athletic participation to facilitate positive psychological outcomes and enhance individuals' capacity to thrive under challenging circumstances.

Findings from this study also reveal that low, medium, and high levels of resilience had different moderation effects on the relationship between COVID-19 and wellbeing. Specifically, college athletes with higher levels of resilience reported a more pronounced negative association between COVID-19 and wellbeing, as the relationship was significantly moderated by the protective factor of resilience. Conversely, college athletes with lower levels of resilience reported that resilience had less of a discernible moderation effect, such that the negative relationship between COVID-19 and wellbeing appears to be negligible. This finding is encouraging, as it suggests that despite the significant impact of the COVID-19 pandemic on wellbeing, college athletes with higher levels of resilience were able to maintain better mental health outcomes compared to their peers with lower resilience. This underscores the importance of fostering resilience in college athletes, as it serves as a critical buffer against the adverse effects of external stressors like a global pandemic.

Of further note, there is an increasing recognition that resilience may not always be positive, rather resilience can also reflect maladaptive behaviors (Mahdiani & Ungar, 2021). For example, demonstrating resilience and "mental toughness" by competing through a serious injury may only reinforce mental health stigma. Regardless, within this study, athletes with higher levels of resilience also consistently reported higher levels of wellbeing—compared to those with medium or low levels of resilience—suggesting the general positive effect of resilience when experiencing a traumatic event. Ultimately, further research examining resilience on a continuum of adaptability may be necessary.

Limitations and Future Directions

No study is without its limitations. This study, for instance, relied on cross-sectional data, which inherently limits the capacity for causal inference. In the future,

longitudinal research should be considered to monitor resilience and wellbeing across a sport season and throughout the careers of college athletes. Such studies could provide insights into how mental health may be affected throughout different phases of one's athletic and academic career. Additionally, within this study, participants represented a relatively homogeneous population of college athletes. Future research must be inclusive of a diverse and representative sample of college athletes across conferences, regions, and demographics to enhance the generalizability of the findings. Further inquiry regarding the development of resilience and resilience-related life skills may be warranted. Such research may also consider examining the role of social support, team cohesion, mental health services, and other protective factors of mental health.

Conclusion

In support of the resilience literature and the conceptual framework of sport resilience, findings from this study help to illuminate the complex relationship between resilience and mental wellbeing during the COVID-19 pandemic. Regardless of stress level after the COVID-19 pandemic, college athletes with higher levels of resilience maintained relatively high levels of mental wellbeing, compared to their peers with lower resilience. These results underscore the importance of interdisciplinary and strength-based mental health support within collegiate athletics. For instance, athletic department administrators, coaches, athletic trainers, and licensed mental health professionals should prioritize developing resilience and resilience-related skills (e.g., coping strategies, emotional regulation) among athletes. Such life skills programs may simultaneously prepare college athletes for their unique everyday challenges, such as the physical and psychological demands of competition, rigorous training and travel schedules, time requirements for both athletics and academics, as well as any potential negative impact of future adversarial events.

Funding: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.
Disclosure statement: The authors report there are no competing interests to declare.

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