

## Utilization and Impact of Career Services Among Collegiate Athletes

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### ABSTRACT

*Career readiness is a concern within the American educational system, particularly among collegiate athletes that must manage intense time commitments both on and off the field. Student services have emerged in higher education to support career preparation, but the utilization and impact of these services for collegiate athletes is largely unknown. The systems-theory framework (STF) of career development identifies a multitude of internal and external factors that influence individual career development. Guided by STF, the purpose of this study was to predict the factors that influence collegiate athletes' utilization of career services and resulting perceived career skills. An online questionnaire was distributed to collegiate athletes at a Division I university, resulting in 143 collegiate athletes completing the questionnaire. Multiple regression analysis demonstrated collegiate athletes' familiarity with career services significantly predicted their utilization of career services. In turn, utilization of only four of nine career services investigated (i.e., Careers Online, Career Fairs, Career Workshops, and Athletic Academic Advisor) significantly predicted perceived career skills positively. Implications for the design and marketing of career services for collegiate athletes are discussed.*

*Keywords:* career development, career readiness, career skills, student support services

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Career services emerged in American higher education in the early 1900s to address the vocational needs of college students (Dey & Cruzvergara, 2014). The delivery of career services has continued to evolve based on shifting economic, political, social, generational, and cultural norms. The National Association of Colleges and Employers (2014) highlights the primary purpose of career services is to assist students in “developing, evaluating, and/or implementing career, education, and employment decisions and plans” (p. 5). As a whole, university career services help students solve career problems, develop career skills, make career decisions, and implement career plans.

The advent of the College Scorecard and increased focus on higher education's return on investment has led policymakers to recognize the value of career services in relation to university recruitment, retention, and revenue (Blagg & Blom, 2018; Dey & Cruzvergara, 2014). In light of this growing interest, scholars have sought to examine the impact of career services on student career development. For example, scholars have demonstrated completion of a college career development course increases students' career self-efficacy, career decision-making, resume quality, and interviewing skills (Fouad et al., 2009; McDow & Zabrocky, 2015). Further, career counseling interventions have increased students' career exploration (Owens et al., 2016) and improved their career decision-making over the long-term (Van Raalte et al., 2017).

Despite the positive outcomes associated with career services, scholarship suggests career services often are unknown and underutilized by students. For example, Fouad et al. (2006) found 88% of student respondents were aware of university health services, while only half were aware of career development services. Similarly, Dietsche (2012) found only 20% of student respondents utilized career counseling, peer tutoring, or personal counseling services. These studies examined the general student population; however, within this population, there are particular student groups at greater risk in terms of career readiness – such as collegiate athletes – that may warrant a more targeted investigation of their career services utilization (Linnemeyer & Brown, 2010).

While college sport provides an opportunity for collegiate athletes to develop transferrable skills applicable to the work environment (e.g., goal setting and attainment, self-motivation; McKnight et al., 2009), collegiate athletes lag in terms of career readiness comparatively to their non-athlete counterparts (Linnemeyer & Brown, 2010). Moreover, many collegiate athletes place greater emphasis on their sport than academics due to athletic demands overriding career preparation (Martin et al., 2010; Rubin & Moses, 2017; Simiyu, 2010), which can negatively impact their career maturity (Linnemeyer & Brown, 2010; Murphy et al., 1996). Considering the additional challenges collegiate athletes navigate to balance academic and athletic responsibilities, institutions have recognized their responsibility to provide an environment conducive for collegiate athletes to succeed (Carodine et al., 2001). This has led various institutions to invest greatly in the career services they provide for their collegiate athletes, including internship opportunities, financial literacy, and networking opportunities (Coffin et al., 2021; George, 2020). Despite these new investments, little is known on whether collegiate athletes are utilizing the services provided to them or if the services are helping collegiate athletes develop the competencies needed to succeed in their future careers. Thus, the purpose of this study was to predict the factors that influence collegiate athletes' utilization of career services and resulting perceived career skills. More specifically, we sought to answer the following questions:

RQ1: Do demographics, feelings of career readiness, and familiarity with career services predict collegiate athletes' utilization of on-campus career services?

RQ2: Do demographics, feelings of career readiness, and utilization of career services predict collegiate athletes' perceived career skills (i.e., critical thinking, interview, career preparation, and teamwork skills)?

### **Systems-Theory Framework of Career Development**

Career development is a complex experience shaped by a multitude of internal and external factors (Duffy & Dik, 2009; Tate et al., 2015). Early career development literature, particularly career theory, faced criticism for being too focused on intrapersonal issues without acknowledging contextual issues associated with career development. This criticism spurred discussion around theoretical integration and convergence related to career development theories (McMahon, 2002; Savickas & Lent, 1994). In response, McMahon and Patton (1995) proposed a systems-theory framework (STF) that integrates career development theories, accounting for the multitude of factors that influence career development.

The STF of career development draws on a systems-view of career behavior (Osipow, 1983), wherein a system is defined by the functioning and interdependence of its separate parts (Kraus, 1989; Osipow, 1983). A systems-view involves understanding the dynamic behavior of the whole system (Arnold & Wade, 2015). In terms of career development, McMahon and Patton's (1995) framework identifies traits specific to the individual (e.g., age, gender, ethnicity, personality, abilities) as well as influential historical, social, and environmental contexts as parts of the system in addition to chance and change over time. While the STF unites career development models, the metatheoretical nature of the model makes it challenging to test specific hypotheses. However, various components and connections within the model can be studied in greater detail separately. For the current study, the authors utilized scholarship to inform their selection of individual factors influencing collegiate career development to identify specific factors that predict career development within the collegiate athlete population.

## Model Development

To understand what influences collegiate athletes' utilization of career services and how their utilization of career services influence collegiate athletes' career preparedness, we developed five regression models consisting of variables at the interpersonal, social, and environmental level of the STF.

First, the interpersonal variables included in all models were race, gender, age, academic year, and career readiness. Race, gender, age, and academic year were chosen because of previous relationships established between them and career development (Fouad & Kantamneni, 2013; Makela et al., 2014; Tyrance et al., 2013). Additionally, career readiness variables (i.e., career choice anxiety, need for self-knowledge, and need for career knowledge) were included at the interpersonal level due to collegiate athletes' lower career maturity and decision-making compared to non-athletes (Linnemeyer & Brown, 2010).

Next, for the social level of STF, we included collegiate athletes' overall familiarity with career service programming on campus. Familiarity was included in model 1 because scholars have proposed that awareness of career services is a key predictor of their utilization (Fouad et al., 2006). Additionally, since collegiate athletes often report low utilization of career services (Mahoney, 2011; Martens & Lee, 1998), understanding familiarity may provide insight into potential strategies to enhance utilization of career services. More specifically, one's awareness (i.e., familiarity) with a good or service is likely to enhance their preference and utilization of that good or service (Zajonc, 1968). Since one's awareness of a good or service often comes from social exposure through peers, family, and media, we believe this variable provides a look into the potential socialization into career service programming from collegiate athletes' social environment.

Finally, for the environmental level of STF, we included collegiate athletes' utilization of each of the career service programs available on campus. Research has demonstrated the value of career services in enhancing the career decision-making self-efficacy of collegiate athletes (e.g., Burns et al., 2013; Van Raalte et al., 2017). Utilization for each career service program was included, as we sought to examine the unique influence each service had on collegiate athletes' career development. More specifically, as shown in models 2 through 5, we examined how interpersonal variables and utilization of career services influenced collegiate athletes' development of four career competencies (i.e., career preparation, interviewing, teamwork, and critical thinking). These four competencies, developed by Parietti and colleagues (2016), were chosen due to their breadth of covering skills collegiate athletes need to transition into the job market, including effective communication, problem-solving, cultivation of relationships, development of career materials, and job interviewing skills (Bryen et al., 2007; Joranson & Wider, 2009).

## Method

### Research Setting

The setting for this case study was a large public university in the Midwestern United States that maintains a history of successful Division I athletic programs. The university's athletic department has received notoriety for being a national leader in collegiate athlete development programming. At the time of this study, collegiate athletes had special access to a resume tutor, a designated athletic academic advisor, and an internship program. Collegiate athletes also had access to a wide range of programming available to the general student body, including access to career development workshops (e.g., job search, interview), assistance with career-related tasks (e.g., writing a cover letter), and access to the latest job and internship postings, career tips, and one-on-one counseling. Detailed descriptions of athletic department and campus-wide career services are provided in Table 1.

**Table 1**

*On-Campus Career Services Descriptions*

On-Campus Service	Description
Athletic Academic Advisor*	Consultation to support collegiate athletes' academic, personal, and professional development
Career Fairs**	Event facilitating students meeting with potential employers/recruiters to exchange information and possibly interview
Career Workshops**	Educational sessions to develop students' career-related competencies and prepare students for the job search
Careers Online**	Online resource to assist students in their career decision-making processes (e.g., resume/cover letter development; interview preparation). Provides information on upcoming career fairs, workshops, employer relations, career exploration, and career searching.
College Advisor**	Consultation regarding students' career opportunities
Internship Program*	Internship program facilitated by the athletic department for collegiate athletes to gain work experience. Interns gain real-world experience to build their resumes and participate in 8 hours of professional development each week
Job Network**	Online resource provides students with postings for jobs, internships, co-ops, and career opportunities. Allows students to connect with employers as well as access information on upcoming career fairs and on-campus recruiting events
Professional Development Course*	Semester-long course to prepare collegiate athletes for life after sport and transitioning out of athletics
Resume Tutor*	Consultation to assist collegiate athletes with the development and revision of a professional resume. The resume tutor is housed within GU's athletic department and is available to meet with collegiate athletes on-on-one or as a group

*Note.* \*Collegiate athlete support services, \*\*University-wide career services

While there are noted limitations when focusing on one setting in an investigation (Polit & Beck, 2010), there also are benefits. Scholars have noted that using strategic case selection can reveal greater insight on what makes a specific program or initiative effective (Flyvbjerg, 2006; Seawright & Gerring, 2008). While differences in the organizational structure of programs may exist, the content disseminated through the programs largely remains consistent. Support from organizations such as the National Association of Academic and Student-Athlete Development Professionals enables dissemination of best practices and benchmarking across collegiate athlete development programs. This can result in isomorphism, in which large, well-funded athletic departments implement similar programs to achieve legitimacy (Navarro et al., 2019). Due to the isomorphic nature of collegiate athlete development programming, it is fair to suggest this university's programming is reflective of and applicable to many NCAA Division I institutions.

## Participants

The response sample consisted of 143 collegiate athletes that represented 32 of the 37 varsity sport programs. There were 86 female (60.1%) and 49 male (34.3%) athletes in the sample, ranging from 18–23 years old. Twenty-five participants reported receiving full scholarship (17.5%), 66 participants received partial scholarship (46.1%), and 52 participants received no scholarship (36.2%). All undergraduate academic years were represented: 29 freshman (20.3%), 26 sophomores (18.2%), 49 juniors (34.3%), and 39 seniors (27.3%). Additionally, ethnicities were reported as follows: 116 White (81.1%), 8 Asian (5.6%), 7 Mixed (5.1%), 5 Black/African American (3.5%), and 2 Hispanic (1.4%). American Indian or Alaska Native, Pacific Islander, and Unknown ethnicities reported less than 1%.

## Procedures

After obtaining IRB approval and support from the university's Student-Athlete Support Services Office, an initial invitation email was sent from the authors to 1,036 collegiate athletes containing informed consent and a Qualtrics link providing access to the online questionnaire, which took approximately 10 minutes to complete. Over the course of 30 days following the initial email dissemination, two follow-up reminder emails were sent to the collegiate athletes. All responses were stored within a Qualtrics database and participants' responses remained anonymous. In total, 143 questionnaires were returned (response rate = 13.8%). Despite a low response rate, Fosnacht et al. (2017) suggested that data under low-response conditions (i.e., 5% to 10%) still can be reliable, provided there is a large sampling frame of at least 500 students.

## Measures

The instrument utilized in the study previously was created and validated by Parietti and colleagues (2016). The instrument was designed using a combination of established scales and developed items and validated through a series of reliability testing, described below.

Perceived career skills were measured using the Competencies Related to Career Readiness scale, established by Parietti and colleagues (2016). The Competencies Related to Career Readiness scale was created using a series of constructs gathered from literature and college sport practitioners (e.g., problem solving, oral communication, leadership). Item responses were on a 6-point Likert scale, ranging from 1 (low skills/abilities) to 6 (high skills/abilities), and contained a total of 20 items related to four major career skills (i.e., interviewing skills, critical thinking skills, career preparation skills, and teamwork skills). Parietti and colleagues (2016) conducted a principal component analysis (PCA), with all constructs meeting .40 threshold. Additionally, Parietti and colleagues' (2016) reliability testing confirmed the construct validity and reliability of the subscales, with Cronbach's alphas ranging from 0.81 to 0.88.

Feelings of career readiness was measured using the Career Factors Inventory (CFI; Chartrand et al., 1990), modified for a collegiate athlete population. The CFI contains 21 items organized into five sub-scales (i.e., career choice, anxiety, generalized indecisiveness, need for career information, and need for self-knowledge) with responses rated on a 5-point scale (Chartrand et al., 1990). Parietti and colleagues (2016) had a panel of experts review the CFI, who suggested items be placed on a six-point Likert scale to eliminate no-opinion bias (Krosnick et al., 2002). In addition, three items were removed from the instruments due to concerns with clarity of item responses (e.g., dry/wet and loose/tight anchors were removed for the stem "When I think about what I want my career to be, I feel"). Following panel review, Parietti and colleagues (2016) conducted a PCA, leading to the removal of one item for self-knowledge (i.e., "What things are most important to me") due to it falling below the .40 threshold for construct validity. Additionally, reliability of the modified CFI was established through Cronbach's alphas, which ranged from .80 to .88. Ultimately, the modified CFI consisted of 17 items organized into four subscales as follows: career choice anxiety (4 items), generalized indecisiveness (5 items), need for career information (5 items), and need for self-knowledge (3 items).

Familiarity and utilization of career services, as well as demographics, were measured through developed items. More specifically, collegiate athletes were asked to report their familiarity and utilization of five career services provided by the institution and four provided by the athletic department (see Table 1), on a 6-point Likert scale. Familiarity was rated from 1 (very unfamiliar) to 6 (very familiar), while utilization was rated from 1 (no utilization) to 6 (great utilization). Demographics consisted of five items inquiring about collegiate athletes' scholarship status, age, academic year, gender, and racial/ethnic groups. Senior, male, and white were coded as 0 for the dummy variable.

### Statistical Analysis

First, data were screened for missing values at the item, person, and construct level. In total, 57.9% of respondents were partial respondents (i.e., missing data on at least one variable) (Newman, 2014). Given that the percentage of respondents who are partial respondents (PRPR) rate was greater than 10%, the author's chose to handle missing data through full information maximum likelihood (FIML) to make full use of the available data (Newman, 2014). Perceived career skills then were reduced into scale scores based upon reliability testing previously established by Parietti et al. (2016). Additionally, composite scores for utilization and familiarity of career services were computed based on the average utilization and familiarity scores reported (Roth et al., 1999).

Next, the assumptions of multiple linear regression were considered. Normality, linearity, multicollinearity, and homoskedasticity were examined using skewness, kurtosis, and collinearity statistics in addition to residual plots and scatterplots of the dependent and independent variables. The test for normality indicated that each dependent variable fell within an acceptable range for skewness (+2.00 to -2.00) and kurtosis (+5.00 to -5.00; Kendall & Stuart, 1958). Scatter plots indicated the assumption of linearity was met (Hair et al., 2010). Multicollinearity was tested using tolerance and VIF statistics that were within the accepted limits (VIF < 5.00 and tolerance > 0.20) for all variables except one (i.e., freshman; Hair et al., 2010), which subsequently was removed from the model (Schroeder et al., 1990). Residual plots indicated data were not evenly distributed, therefore the assumption of homoskedasticity was not met (Hair et al., 2010). Failure to meet homoskedasticity was accounted for through use of the robust maximum likelihood estimator in MPlus (White, 1980). Multiple linear regression then was conducted to assess the antecedents and outcomes of utilization of career services.

### Results

Multiple linear regression was employed to predict collegiate athletes' utilization of career services based on their demographics, feelings of career readiness, and familiarity with career services. The regression statistics for model one can be found in Table 2. Results from the multiple linear regression indicated that collegiate athletes' utilization of career services was significantly positively predicted by identifying as a female ( $B = .45, p = .03$ ) and familiarity with career services ( $B = .56, p < .001$ ). Meanwhile, utilization was negatively predicted by a sophomore class rank ( $B = -.65, p = .04$ ). The model explained 28.4% of the variance in collegiate athletes' utilization of career services. All other demographic and feelings of career readiness variables had non-significant relationships.

**Table 2***Regression Model with Heteroskedasticity for Utilization of Career Services*

	<i>B</i>	<i>SE</i>	<i>T</i>	<i>R</i> <sup>2</sup>
<i>Constant</i>	1.24	.23	5.45	.28
Female	.45*	.20	2.20	
Sophomore	-.65*	.31	-2.07	
Junior	.01	.25	.03	
Minority	.08	.36	.22	
Age	-.05	.11	.49	
GPA	-.34	.23	-1.51	
Scholar	.01	.23	.06	
Career Choice Anxiety	.03	.10	.28	
Need for Self-Knowledge	.06	.10	.57	
Need for Career Information	.05	.15	.33	
Generalized Indecisiveness	.17	.11	1.62	
Overall Familiarity of Career Services	.56***	.12	4.65	

Note.  $p < .05^*$ ,  $p < .01^{**}$ ,  $p < .001^{***}$

Next, the authors ran four linear multiple regression models to predict collegiate athletes' perceived career skills (i.e., critical thinking, interviewing, career preparation, and teamwork skills) based on collegiate athletes' demographics, feelings of career readiness, and utilization of careers services. The regression statistics and significance for each of the models can be found in Table 3. In terms of demographics, age positively predicted critical thinking ( $B = .11$ ,  $p = .02$ ) and teamwork skills ( $B = .13$ ,  $p = .002$ ). Critical thinking was positively predicted by GPA ( $B = .41$ ,  $p = .02$ ), while identifying as a female negatively predicted perceived interview skills ( $B = -.63$ ,  $p = .006$ ). Career choice anxiety was the only significant relationship among the feelings of career readiness variables, and it positively predicted critical thinking ( $B = .11$ ,  $p = .03$ ). Finally, for the perceived career skills, critical thinking was positively predicted by collegiate athletes' utilization of Careers Online ( $B = .15$ ,  $p = .023$ ); however, Job Network was found to have a significant negative effect ( $B = -.12$ ,  $p = .027$ ). Interview skills were positively predicted by collegiate athletes' utilization of Career Workshops ( $B = .22$ ,  $p = .013$ ) as well as their Athletic Academic Advisor ( $B = .20$ ,  $p = .002$ ), but saw a negative effect from the Professional Development Course ( $B = -.24$ ,  $p < .001$ ). Collegiate athletes' career preparation skills were positively predicted by their use of Career Fairs ( $B = .15$ ,  $p = .025$ ). Lastly, teamwork skills were found to be positively predicted by collegiate athletes' utilization of Careers Online ( $B = .17$ ,  $p = .004$ ) as well as their Athletic Academic Counselor ( $B = .07$ ,  $p = .048$ ). However, collegiate athletes' teamwork skills were negatively predicted by their use of the Job Network ( $B = -.14$ ,  $p = .01$ ). All other variables in the models for perceived career skills were not significant.

**Table 3**

*Regression Analysis with Heteroskedasticity for Perceived Career Skills*

	Critical Thinking	Interview	Career Prep	Teamwork
R <sup>2</sup>	.35	.32	.27	.26
Constant	4.22***	4.24***	2.96***	5.02***
Female	-.22	-.63**	-.02	-.22
Sophomore	-.13	-.19	.14	.16
Junior	-.005	-.52	.06	.02
Minority	-.001	.36	-.25	.02
Age	.11*	-.04	.11	.13*
GPA	.41*	-.07	.06	.29
Scholarship	-.003	.21	.14	.07
Generalized Indecisiveness	.08	.07	.06	.08
Career Choice Anxiety	.11*	-.02	.04	-.02
Need for Self-Knowledge	-.09	-.12	-.11	-.10
Need for Career Information	.06	-.07	.13	.01
Job Network	-.12*	.19	.02	-.14*
Careers Online	.14*	.09	.02	.17*
Career Fairs	.05	.02	.15*	.02
Career Workshops	-.06	.22*	.09	.02
Professional Development Course	.004	-.24***	-.04	-.04
Internship Program	-.02	-.02	.08	-.025
College Advisor	.01	-.07	-.03	.002
Athletic Academic Advisor	.058	.19**	.01	.07*
Resume Tutor	-.03	-.09	-.01	-.001

Note.  $p < .05^*$ ,  $p < .01^{**}$ ,  $p < .001^{***}$

### Discussion

The purpose of this study was to predict the factors that influence collegiate athletes' utilization of career services and resulting perceived career skills. Results are discussed in relation to the STF of career development, with implications for how to improve career services to enhance collegiate athlete career development.

#### Antecedents of Utilization of Career Services

For RQ1, gender and academic standing were the only demographic variables that significantly predicted collegiate athletes' utilization of career services. Females were found to have higher utilization scores comparatively to males, which may be tied to career maturity differences across genders. Savickas (1984) defines career maturity as "readiness to cope with vocational development tasks" (p. 222), which reflects whether an individual is equipped with the knowledge and skills to make realistic career decisions. In a study on Division I collegiate athletes, Tyrance and colleagues (2013) identified that male athletes' belief in their understanding of the job market and employment trends was higher than female athletes. Previous scholarship also found lower perceived career readiness and related competencies among female collegiate athletes compared to males (Fogarty & McGregor-Bayne, 2008; Parietti et al., 2016). Female

collegiate athletes, therefore, may utilize career services more readily to enhance their knowledge of the job market and receive more guidance with planning their future career (Dilley-Knoles et al., 2010; Houle & Kluck, 2015). This finding suggests that gender differences can impact how collegiate athletes interact with career services and their preparation for entering the workforce.

In relation to academic year, sophomores were found to have lower utilization scores than juniors and seniors. Scholars have noted that career maturity is vital to college persistence in freshman students (Allen, 2007; Perry et al., 1999). Thus, as college students progress in their careers, their career maturity and proximity to career entry may drive their use of career services to achieve their goals (Allen, 2007; Naidoo, 1998). Universities can apply these findings to their career services marketing strategies and deliberately target collegiate athletes with a sophomore academic standing to increase their utilization.

Considering the number of individual influences united by the STF of career development (McMahon & Patton, 1995), the fact that only two of these variables significantly predicted utilization of career development resources highlights the importance of customizing career development efforts to a specific population. Since the STF of career development is a metatheory, it has the flexibility to study various populations, but findings from this study contribute to pinpointing which individual factors are most likely to affect collegiate athletes. Further exploration into broader variables in the STF of career development (e.g., personality, beliefs) could help with continuing to uncover the most influential, specific factors to collegiate athlete career development.

Next, feelings of career readiness (i.e., career anxiety, self-knowledge, career information, and indecisiveness) were found to be non-significant predictors of utilization of career services. These findings are surprising, as scholars previously have found students who lack self-knowledge or experience career anxiety may be timid in seeking out career services (Germeijs et al., 2006; Kronholz, 2015). Perhaps the lack of relationship between feelings of career readiness and utilization of career services may be explained by students' help-seeking behaviors and decisions. More specifically, scholars have noted that students may pursue different strategies or avenues for help-seeking outside of career services to assist in their career readiness (e.g., emotional help-seeking, self-regulation; Boo & Kim, 2020; Lipshits-Braziler et al., 2016). Feelings of career readiness align with personality traits within the STF of career development; however, since these variables were not significant, personality traits such as athletic identity may be more salient to career development.

Familiarity with career services was found a significant positive predictor of utilization of those services. Mere exposure effect – a phenomenon whereby “mere repeated exposure of the individual to a stimulus is a sufficient condition for the enhancement of his [or her] attitude toward it” (Zajonc, 1968, p. 1) – provides a potential explanation of the impact of familiarity on utilization of career services. Zajonc (1968) determined that frequency of exposure is positively related to the development of favorable attitudes. Essentially, as an individual repeatedly is exposed to a stimulus and develops familiarity with it, the overall preference for that stimulus increases (Harrison, 1977). Therefore, a collegiate athlete who receives consistent messaging about and exposure to a career service may have greater affinity toward using it in the future.

While this appears a straightforward connection, additional steps can be taken to explore how collegiate athletes become familiar with career services, and which messaging and marketing initiatives are most effective for creating favorable attitudes. This is particularly important as students often fail to utilize career services due to a general lack of knowledge of the career services process (Fouad et al., 2006; Mahoney, 2011; Makela et al., 2014). Identifying how to expose collegiate athletes to career services more effectively – thus promoting greater familiarity – could help address the issue of lack of utilization.

### **Antecedents of Perceived Career Skills**

When considering RQ2, demographics also influenced perceived career skills. More specifically, age and GPA positively predicted critical thinking, and age also positively predicted teamwork. Meanwhile, the female gender was negatively predictive of interview skills. Since GPA has been related to higher critical thinking (Liu et al., 2016), it is reasonable that higher GPA also would predict critical thinking skills in this study. Older collegiate athletes also have amassed

more time in the collegiate setting, likely providing more opportunities through their athletic and academic experiences to develop critical thinking skills such as time management, problem solving, and career planning. Similarly, upperclassmen have more exposure to the athletic environment, which promotes team camaraderie, thus older players would have more time to develop teamwork skills.

Females scored lower on interview skills than males, which could be explained by social role expectations and gender stereotypes. Based on historical divisions of labor and social arrangements, agentic or work-related roles often are more associated with men, while communal and caretaking roles are ascribed to women (Harrison & Lynch, 2005). As a result of these perceptions, social learning can lead individuals to pursue careers that are considered congruent with these roles and accept beliefs about their abilities based on gendered stereotypes (Eagly et al., 2000; Olsson & Martiny, 2018). The structure of the mock interviews and networking may have led to role incongruence depending on what career choices were represented. For example, since gendered stereotyping has contributed to an underrepresentation of women in STEM fields and top leadership positions (Croft et al., 2015), a networking event for these careers may have diminished the interest or confidence of female participants and resulted in lower scores for the associated skill competencies. Gender and role self-concept were foundational concepts that informed the development of a STF of career development. The findings related to gender differences in this study confirm the need to view career development from a systems framework.

In relation to feelings of career readiness, theoretically, greater career anxiety and lower career knowledge might prompt higher utilization of career services. However, the current study found a non-significant relationship between feelings of career readiness and utilization of career services. Feelings of career readiness may not be a strong enough motivator to influence utilization of career services, requiring external motivation to prompt utilization – similar to required study hours (Dilley-Knoles et al., 2010).

The regression models demonstrated several positive relationships between utilization of career services and perceived career skills. Critical thinking and teamwork skills were positively associated with the collegiate athletes' utilization of Careers Online, which offers a wide range of resources (e.g., career guides, resume templates, career tips) and programs (e.g., networking events, alumni mentorships, career communities). Research suggests these types of programs and resources can assist in critical thinking development (Zalaquett & Osborn, 2007). Therefore, findings in this study provide further support for the benefit of online career resources in developing critical thinking skills (e.g., problem solving, prioritization, time management). While the connection between Careers Online and critical thinking skills appears organic, the explanation for how utilization of Careers Online predicted teamwork skills (i.e., dependability, oral communication, independence, leadership) is less clear. Perhaps collegiate athletes' use of Careers Online allowed them to engage in programs (e.g., mentorship) or workshops (e.g., resume building) that encouraged collegiate athletes to connect with others, consequently developing their social and human capital resources (Hirschi, 2012).

Collegiate athletes' interview skills were positively predicted by their utilization of Career Workshops and their Athletic Academic Advisor. The Career Workshop educational sessions targeted interview skills, which likely accounts for this relationship. However, the Career Workshop had no significant relationship with career preparation skills, suggesting further curriculum development may be needed for this career service to develop collegiate athletes' technical skills necessary for the job search process. Consultation with an Athletic Academic Advisor also significantly positively predicted teamwork and interview skills, emphasizing the role of academic counselors in preparing collegiate athletes for the workforce.

Collegiate athletes' utilization of Career Fairs increased career preparation skills. The career preparation skills subscale includes attending career fairs, preparing career materials (i.e., cover letter, resume, and job application), and written communication. In general, students are encouraged to be prepared with a cover letter and resume or portfolio prior to attending a career fair to assist in marketing themselves to potential employers (Dey & Cruzvergara, 2014). Thus, collegiate athletes who utilized Career Fairs are likely to have prepared career materials to assist in their networking efforts. Further, utilization of Career Fairs likely is to increase attendance at career fair events. Once at the event, collegiate athletes may further develop their career

preparation skills by sharing career materials, completing applications, and possibly engaging in other written communication with potential employers (Payne & Sumter, 2005).

The current study demonstrated no individual career service positively predicted the development of all four perceived career skills. This is unsurprising given the breadth of services offered and the goals of each program. Universities are encouraged to develop their career services with clearly defined goals and targeted outcomes (Sanghvi & Kubu, 2017). In this sense, the likelihood of one career service addressing all career skills is low, as universities offer specific services to develop specific skills. Thus, for collegiate athletes to effectively develop several career skills, it may require the utilization of various career services.

Career services that did not predict collegiate athletes' career skills included: College Advisor, Resume Tutor, and Internship Program. The College Advisor may lack direct influence on collegiate athletes' career skills due to greater focus on collegiate athletes' academic field of study. Whereas the College Advisor was too broad and possibly outside the scope of career development, Resume Tutor likely was too narrow to develop diverse career skills. Lastly, the internship program having no effect on collegiate athletes' career skills contradicts previous findings from Coffin and colleagues (2021), who found that a campus-wide internship program improved collegiate athletes' communication, collaboration, and work ethic. The Center for Career and Professional Development explored by Coffin and colleagues (2021) intentionally was designed to develop nine core competencies to career readiness, which may have contributed to the program's impact. In the current study, the lack of skill development from internships may be explained by the lack of a cohesive and purposeful design in the internship program. Thus, more programs should aim to construct internship opportunities that meet the career interests of collegiate athletes and are based in developing core career competencies.

Some career services had significant negative relationships with career skills, such as the Professional Development Course, which predicted a decrease in interview skills. The negative relationship may be attributed to the course curriculum, which was focused on collegiate athlete issues instead of career development. Similarly, utilization of the Job Network, an online job posting resource, had negative relationships with critical thinking and teamwork skills. Since this service is an online job posting resource, it may only serve as a supplementary career resource rather than to intentionally develop collegiate athletes' career skills. Ultimately, these non-significant and negative relationships demonstrate the importance of strategically designing career services to target desired career development outcomes.

## Implications

The current study identified several individual factors influencing collegiate athletes' utilization of career services and perceived career skills, which can inform the design and marketing of career services to enhance collegiate athletes' career development. Moreover, collegiate athletes who were more familiar with career services were found more likely to use those services, which supports using targeted marketing strategies to make career services more widely known to collegiate athletes. Universities should expose collegiate athletes to career services early in their collegiate careers, to ensure athletes are familiar with the available services as well as what each service provides. However, simply providing information to collegiate athletes likely is not enough to enhance their familiarity with career services (Fouad et al., 2006). Rather, athletic departments should seek to expose collegiate athletes to career services in more innovative ways, such as bringing collegiate athletes into planning career-related events (Schaub, 2012). Further, it may be helpful for coaches, team staff, and administrators to help collegiate athletes access career services available to the general student body, as collegiate athletes appear more responsive to support offered by career services outside their athletic department (Huml et al., 2014).

Since familiarity with career services predicted increased utilization of those services, and utilization predicted some perceived career skills, it is crucial for coaches and administrators to encourage collegiate athletes to utilize a variety of career services. Collegiate athletes who utilized their Athletic Academic Advisor improved interviewing skills, so relationships between collegiate athletes and these advising resources should continue to be fostered. Career Workshops aided the development of interview skills, making this a particularly useful service for collegiate athletes

that are in the process of applying for internships or jobs. Utilization of the Job Network was a negative predictor of teamwork and critical thinking skills, which may indicate collegiate athletes are using the Job Network without considering job fit and applicability. As such, collegiate athletes may benefit from a social support system (e.g., coaches, advisors) to aid the use of online resources. By intentionally providing customized career opportunities, collegiate athletes may think more critically about the positions to which they apply.

Overall, these results indicate it is important that institutions and athletic departments begin identifying the specific goal and objectives for each of the career services available to collegiate athletes. Since only a small fraction of NCAA athletes will continue their sport pursuits beyond the collegiate level (e.g., 1.2% of men's basketball players; NCAA, 2020), it is imperative to support their career development outside the athletic sphere, especially considering the additional constraints on their resources and time. Thus, a variety of career development resources that are theoretically grounded can help collegiate athletes develop important, lifelong skills that will positively impact their career development. Strategies to deliberately increase familiarity, and subsequently utilization, of the career services will amplify the positive benefits these services can have on the career skills and overall development of collegiate athletes.

Based on the relationships found in this study and improvements the university under study began implementing, other athletic departments could integrate some of the following suggestions to improve their career services:

- Staffing: Hire professional staff to assist with collegiate athlete development, with particular focus on career development.
- Programming: Develop career workshops, career fairs, and networking events within the athletic department to support the specific needs of collegiate athletes. Create a leadership institute to enhance the leadership, character, and career development of collegiate athletes and prepare them for life after graduation.
- Support: Encourage coaches to help collegiate athletes secure internships and jobs and track collegiate athletes' career progress.
- Marketing: Create an app designed to aid collegiate athletes in identifying their career goals and tracking their career progression which can, in turn, enable support staff to target programming, messaging, and support to individual collegiate athletes.

### **Limitations and Future Directions**

While the findings provide some evidence of the importance of familiarity and utilization of career services, it is important to note the limitations present within the study. First, the study had a low response rate leading to a small sample size, which may affect the reliability of the findings. There also is a possibility of non-response bias due to the small sample size. Students that responded might have strong feelings about this topic – either positively or negatively – while the perspectives of students with neutral feelings might not be adequately represented. Another limitation was the amount of missing data within the study. The authors attempted to address these concerns using FIML, but it is important to note this strategy does not guarantee estimates were unbiased, meaning the results should be viewed with caution. Next, the study may be limited by the four perceived career skills that were utilized as indicators of career development. While the skills were found to be reliable in a previous study (c.f., Parietti et al., 2016), they may not represent the skills or competencies the various career services were trying to enhance. Future studies may consider examining the mission of individual career services to determine which skills should be assessed to examine their effectiveness.

There are several avenues researchers can pursue to extend this line of inquiry. Within the model for utilization of career services, only 28.4% of the variance was explained, indicating additional antecedents unaccounted for in the model. Future research may explore other factors influencing utilization of career services, such as social norms or resource demands. Utilization of specific career services was found to positively predict perceived career skills. However, there were no career services that significantly predicted all four career skills, with some services not significantly influencing any skill category. These results demonstrate a need for future research to assess individual career services and identify their intended purpose, which then can be linked to

targeted career skills. By identifying the skills each service is designed to enhance, the efficacy of these programs can be assessed to determine whether they are achieving their goals and contributing to collegiate athlete career development. In turn, this information can help generate implications for enhancing the effectiveness of individual career services.

### Conclusion

Collegiate athletics provides an opportunity for student-athletes to develop several transferrable skills that can be applicable to the work setting (McKnight et al., 2009). However, the time commitment required for collegiate athletes to be successful within their athletic pursuits can negatively affect their career readiness, causing collegiate athletes to lag behind their non-athlete counterparts in terms of career maturity and development (Linnemeyer & Brown, 2010; Martin et al., 2010). Career services – though a valuable resource on college campuses – often are unknown and underutilized by collegiate athletes (Brecht & Burnett, 2019). Through multiple linear regression, this study found familiarity with career services positively predicted utilization of those services. Additionally, individual career services were found to influence collegiate athletes' perceived career skills. Results from this study indicate that familiarity and utilization of career services can help identify whether services are effectively targeting the development of career skills among collegiate athletes and highlight areas of improvement for those services.

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