

Exploring the Relationship between Student-Athletes, Occupational Engagement, and Vocational Identity

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Abstract

Athletic departments in Football Bowl Subdivision (FBS) universities provide academic support services to student-athletes. Even though student-athletes receive career assistance from academic counselors, some studies have found they are behind non-athletes in career development. This study examines the relationship between athletic identity and career identity in student-athletes in comparison with non-athletes, between genders of student-athletes, and between earlier and later years in college for student-athletes using multiple instruments: Athletic Identity Measurement Scale; Vocational Identity Scale of the My Vocational Situation; and the Occupational Engagement Scale-Student. Using responses from 109 student-athletes and 277 non-athletes, this study found that no relationship existed between athletic identity and vocational identity or occupational engagement. Non-athletes had higher occupational engagement levels, while student-athletes had higher vocational identity. Female student-athletes had higher occupational engagement levels than male student-athletes. Student-athletes in years 3 and 4 had higher occupational engagement levels than those in years 1 and 2.

Introduction

Despite minimum academic requirements for athletes to maintain athletic eligibility, penalties for teams not achieving minimum Academic Progress Rates, and weekly maximum hours allowed for participation in coach-directed athletic-related activities, research findings issued by the National Collegiate Athletic Association (NCAA) (2008) concluded that student-athletes perceived themselves more as athletes than as students. The NCAA also reported student-athletes spent more time on athletics than academics, and if given additional time, they would spend it on their sports, not on academics or other extracurricular activities. Despite these results showing athletes' preferences for using their time, on average fewer than 3% of student-athletes in men's and women's basketball, football, baseball, men's ice hockey, and men's soccer will play professional sports (National Collegiate Athletic Association, 2010). Since, according to NCAA advertisements during its Division I men's basketball tournament, "the majority of student-athletes go pro in something other than sports," it would seem important for student-athletes to graduate from college and enter the working world with similar measures of career development when compared to non-athletes

Student-athletes in institutions competing in the Football Bowl Subdivision (FBS) have access to tutors, academic counselors, and career assistance within athletic departments, yet student-athletes trail non-athletes in career development (Blann, 1985; Kennedy & Dimick, 1987; Martens & Cox, 2000; Murphy, Petitpas, & Brewer, 1996; Sowa & Gressard, 1983). Because of the likelihood of student-athletes experiencing identity foreclosure, which is when individuals prematurely make a firm commitment to an occupation or an ideology without exploring internal needs and values (Petipas, 1978; Snyder, 1985), and devoting a large portion of their time to

sports, career development is not a priority (Chartrand & Lent, 1987). Often, the more time a student-athlete devotes to athletic participation, the less confidence he or she has in personal ability to make career decisions (Glastetter-Fender, 2000).

Blann (1985), Lally and Kerr (2005), and Miller and Kerr (2002, 2003) reported that student-athletes go through multiple stages of identity or role focus throughout their college years. These authors showed that during the first two years in college, athletes were more committed to their athletic roles and devoted less time to other activities; in the final one or two collegiate years, they allotted more time and energy to their academic roles to help prepare for future careers. However, past research has been inconclusive or has yet to examine if student-athletes possess comparable measurements of vocational identity and occupational engagement when compared to non-athletes. Furthermore, results of research attempting to find a relationship between vocational identity and occupational engagement using the Athletic Identity Measurement Scale have been mixed or limited.

While some studies examined career development measures of student-athletes, the results have varied. Brown and Hartley (1998) and Martens and Cox (2000) did not find a correlation between athletic identity and career development measures, while Murphy, Petitpas, and Brewer (1996) found athletic identity was inversely related to career maturity (i.e., if a student-athlete had a strong athletic identity, he or she was likely to have a lower level of career maturity). Adler and Adler (1987) found male student-athletes were less advanced than non-athletes in career development measures; Meyer (1990) found career development measures of female student-athletes were more advanced. Kennedy and Dimick (1987), Murphy, Petitpas, and Brewer (1996), and Sowa and Gressard (1983) reported that student-athletes had lower levels of career development than did non-athletes.

While past research has examined career development from the perspective of career maturity and to some extent, vocational identity, career development of student-athletes has not been examined from the perspective of occupational engagement. The Occupational Engagement Scale-Student is linked with many traits considered desirable in college students, such as personal development, vocational identity, and grade point average (Krieshok, Black, & McKay, 2009). The Occupational Engagement Scale-Student examines career development from a combination of an alternative perspective and a rational method. Using surveys that examine decision-making theory from rational and non-rational perspectives will measure if student-athletes are better prepared or less well-prepared than non-athletes in one decision-making process or both processes.

This study had three primary purposes. The first is to establish what relationship, if any, exists between athletic identity and two selected instruments of career development: Vocational Identity and Occupational Engagement. The second is to determine if there are significant differences in the characteristics of career development of student-athletes and non-athletes. The third is to examine the relationship between the career development of male and female student-athletes and between student-athletes in years one and two of college to those in years three and four. Specifically, this study seeks to answer these research questions: (1) In what ways, if any, can self-reported athletic identity, as measured by the Athletic Identity Measurement Scale, identify if student-athletes have lower levels of career development? (2) Are there significant differences in any of the career development levels of student-athletes and non-athletes attending one university that competes in the FBS? (3) Are there significant differences in any of the career development levels of male student-athletes compared to female student-athletes attending one institution competing in the FBS? (4) Are there significant

differences in any of the career development levels of male and female student-athletes in years one and two compared to male and female student-athletes in years three and four attending one institution that competes in the FBS?

Review of Literature

Athletic identity

Brewer, Van Raalte, and Linder (1993) designed the Athletic Identity Measurement Scale to measure the strength and the exclusivity of an individual's identification with the athlete role through a 10-item quantitative inventory. The authors established validity for the Athletic Identity Measurement Scale ranging from .87 to .93 and reliability of .89. Construct validity was demonstrated by showing that mean scores in the Athletic Identity Measurement Scale increased with the level of athletic involvement. So, typically, a competitive athlete should score higher than a recreational athlete who should score higher than a non-athlete.

Within the literature, the Athletic Identity Measurement Scale was associated with positive and negative characteristics. For example, Cornelius (1995) reported that having a stronger athletic identity was associated with having more life management and developmental skills, such as better management of relationships, time, and obligations. This meant a better "ability to structure their lives and to manipulate their environment in ways that allow them to satisfy daily needs and meet responsibilities without extensive direction or support from others" (Cornelius, 1995, p. 569). Student-athletes were found to exhibit good time-management abilities that enabled them to handle the demands of athletics, academics, personal interests, and their social lives. As for negative effects, Jaques' (2000) study of NCAA Division I female student-athletes, reported a significant inverse correlation between scores in the Athletic Identity Measurement Scale and measures of career maturity. This meant female student-athletes with stronger athletic identities had lower scores on all measures of career maturity. Good et al. (1993) found that as the level of athletic identity increased, so did the chance of experiencing identity foreclosure.

Career development and college student-athletes

Finch (2009) found that identities of college athletes were predictors of career decision-making self-efficacy. That is, the more a student-athlete identified with his or her academic identity, the more confidence shown in ability to make career decisions. However, role conflict interfered with academic identity commitment. Role conflict occurred when an individual struggled to find time or energy to support more than one role. Student-athletes may not possess the time, energy, or other resources to support both optimal athletic and academic roles. As role conflict occurred between athletic identity and academic identity, Lally and Kerr (2005) and Miller and Kerr (2002, 2003) showed athletic identity dominated student-athletes' first two years of college.

Research studies have examined multiple aspects of career development including career maturity (Crites, 1971; Crites & Savickas, 1996; Murphy, Petitpas, & Brewer, 1996), vocational identity (Holland, Daiger, & Power, 1980; Leong & Morris, 1989; Lewis & Savickas, 1995; Savickas, 1985), class ranking (Shulman & Bowen, 2001), career decision-making self-efficacy (Brown & Glastetter-Fender, 2000), and student identity among student-athletes (Snyder, 1985) with varied results. Some studies revealed differences, both positive (Chartrand & Lent, 1987; Meyer, 1990) and negative (Adler & Adler, 1987; Blann, 1985; Kennedy & Dimick, 1987; Murphy, Petitpas, & Brewer, 1996; Sowa & Gressard, 1983) in career development between

student-athletes and non-athletes, while others did not find any significant differences (Brown & Hartley, 1998; Finch, 2009; Jaques, 2000). Studies that examined student-athletes and career development have focused on the topics of identity formation, athletic identity, identity foreclosure, multi-stage identity focus, explanations for multi-stage identity focus, and gender differences.

Identity foreclosure

Identity foreclosure occurred when individuals made firm commitments to occupations or ideologies prematurely without exploring internal needs and values. These individuals accepted or committed to roles that best suited them based on the environment and what was socially accepted without discovering other potential interests (Petipas, 1978). This was easy for a student-athlete to do because of devotion to and time involvement with his or her sport. According to Petipas (1978), peers, community members, and social circles typically viewed athletes uni-dimensionally, regardless of what other things athletes valued or were good at, including academics. These athletes viewed themselves as athletes first with other interests secondary. Brown and Glastetter-Fender (2000) found a negative relationship existed between identity foreclosure and career decision-making self-efficacy in male and female student-athletes attending institutions competing in the FBS, thus suggesting that student-athletes who did not experience identity foreclosure had more confidence in their career decision-making abilities. However, Brown and Glastetter-Fender (2000) and Finch (2009) reported no significant relationship between athletic identity and identity foreclosure suggesting a strong commitment to the athletic role did not lead to identity foreclosure.

Murphy, Petitpas, and Brewer (1996) found a negative correlation between identity foreclosure and career development in male and female FBS student-athletes. That is, student-athletes that experienced identity foreclosure had lower levels of career development. These authors also reported an inverse relationship existed between athletic identity and career development. That is, the more intensely student-athletes related to their athletic identities, the lower their career development levels.

In another study focusing on identity foreclosure, Adler and Adler (1987) found that male basketball players entered college with plans of focusing on athletic, academic, and social roles. While the stereotypical view was that student-athletes were only concerned about athletics, many of these players had intentions to focus on academics. They entered college to play sports and earn college degrees to prepare for future employment. Many of these players had high hopes for their academic studies and planned to major in challenging or difficult academic programs in business, engineering, arts, or one of the sciences. While the original message received during the recruitment process supported pursuing and balancing multiple roles, these student-athletes reported they quickly learned that pursuing a challenging and very time-consuming major was not a feasible option. Instead, the time commitment necessary for success in the athletic role quickly dominated time and focus, as academics and socializing became less important concerns (Adler & Adler, 1987). Shulman and Bowen (2001) found the class ranking of male and female student-athletes declined as Division I-A (today's FBS), Ivy League, and Division III student-athletes increasingly ranked in the bottom third of their classes thus suggesting the time, focus, and importance placed on the athletic role.

Athletic role salience, when the athlete role was prominent and took precedence over other potential roles, was further solidified by the way male basketball student-athletes were perceived by peers and professors. Regardless of where male basketball student-athletes were

observed or what they were doing, they were viewed in their primary roles as athletes (Adler & Adler, 1987). Society judged individuals' actions to see if they fit or were appropriate for the roles people ascribed to them (Burke & Reitzes, 1981). Often for student-athletes that meant their actions were judged as appropriate or inappropriate based on how their actions fit with their roles as athletes.

Bowen and Levin (2003), based on their study of male and female student-athletes attending Ivy League and Division III institutions, discussed how easy it was for student-athletes to experience identity foreclosure as they associated primarily with other student-athletes. These authors suggested that a separate athletic culture can lead to identity foreclosure.

Athletes tend...to spend large amounts of time together even outside of the formal demands of membership on a team, to limit extracurricular activity to their sport, and to live with other athletes—evidence that points to the existence of a separate athletic “culture.” (p. 327)

In summary, identity foreclosure happened when individuals accepted roles prematurely without exploring internal needs and values. Overall, student-athletes were prone to experience identity foreclosure because of time demands involved in participating in intercollegiate sports, peer and society perceptions that they were concerned primarily with athletic roles as opposed to academic roles, and associations primarily with other athletes outside of sport settings.

Multi-stage identity focus

Student-athletes have been found to realign athletic and academic roles throughout the college years (Miller & Kerr, 2002). Miller and Kerr (2003) revealed that the lives of student-athletes revolved around three central spheres: athletic; academic; and social. These authors found that male and female Canadian student-athletes participating in basketball, volleyball, track and field, and swimming went through two stages of identity formation while in college. When the student-athletes began college, they were in *Stage 1: Over-identification with the athlete role*. In this period student-athletes had a singular focus on athletics, which dominated their lives and came at a cost as exploration of other interests diminished or were never begun. During the initial stage of this period student-athletes invested very little time and interest in their academic work as sports and commitments to their athletic identities consumed their time and efforts. During the second stage of this period, student-athletes began to focus on academics and increased commitment to their studies. While student-athletes were still fully committed to and gained most of their sense-of-self from the athletic role, they were able to balance their time better between athletics and academics. It was during this stage (second and third years of college) that some student-athletes changed their academic majors.

In *Stage 2: Deferred role experimentation*, student-athletes shifted their primary focus from athletic roles to academic roles. The student-athletes in Miller and Kerr's (2003) study showed declining interest in athletic roles as they transferred priorities to academics and preparation for future careers. While the time devoted to athletics did not drastically decrease, the psychological and mental commitment to sports decreased as the vast majority of student-athletes accepted that their athletic careers were nearing an end since they would not become professional athletes. They devoted more time to their academic roles in an attempt to improve their grades. They also began preparing for continuing their studies into graduate school or focusing on a career. Blann (1985), Lally and Kerr (2005), and Miller and Kerr (2002, 2003)

supported this two-stage theory. Blann (1985) found that male freshmen and sophomore student-athletes scored significantly lower than did non-athletes on measures of educational and career plans. However, as juniors and seniors there were no significant differences between student-athletes and non-athletes on measures of educational and career plans, which suggests there was a multi-stage identity focus for student-athletes as they progressed through college.

Lally and Kerr (2005) found student-athletes had a very different identity focus during their first two to three years compared with the final year of college. During the *Early career plans* (years one through three), student-athletes were unsure of their academic futures, had hopes of post-college athletic careers, and found themselves fully committed to their athletic identities with a lack of investment in academic identity. Consistent with Adler and Adler's (1987) findings, student-athletes in the *Early career plans* stage defined themselves by athletic roles and had strong relationships with teammates and coaches.

A shift in roles took place prior to the student-athletes' final year or two of eligibility when they began to increase focus on academics and career plans (Lally & Kerr, 2005). During the *Late career plans* phase (last year or two of college), student-athletes acknowledged that their athletic careers would end with college. They also realized that because of athletic role salience, their academic performance typically had suffered. Student-athletes changed from being fully committed to their athletic identities to devoting more time to academic work; some attempted to make up for previous academic shortcomings. According to Lally and Kerr (2005), while student-athletes maintained a strong commitment to their athletic roles, it was no longer exclusive or prioritized. With increased investment in their studies, student-athletes expanded their social networks and included more peers from academic programs (Lally & Kerr, 2005).

Explanations for why some student-athletes may not have been focused on their academic identities included taking less time-consuming or less challenging classes to help maintain the minimum grade point average required for athletic eligibility and possibly preferential treatment by professors leading to false student identities (Snyder, 1985). Chartrand and Lent (1987) found that as student-athletes' commitment to the athletic role increased their abilities to make career decisions lessened because they failed to pursue alternative interests or explore other options. This could have happened because a strong commitment to the athletic role led to an increase in time allocated to it, which left little time, effort, or energy to pursue other interests. Marten and Lee (1998) suggested time, structure, athletic identity, and sport commitment as reasons why student-athletes had lower levels of career development or delayed career development. Because coaches required or expected student-athletes to devote such large portions of time to their sports, student-athletes fell behind in career development according to Sowa and Gressard (1983) who found significant differences between student-athletes and non-athletes in educational plans, career plans, and mature relationships with peers. Commitment to athletic identity led to decreased involvement in academic or social roles. Sport commitment without exploring other potential roles led to identity foreclosure. As a result, most student-athletes were not as involved with other activities as many other students were.

Career decisions by athletes were often postponed or neglected completely until participation in intercollegiate sports neared an end (Hinkle, 1994). Many student-athletes began their collegiate careers with dreams of turning professional and continuing sport participation. Often, as a student-athlete proceeded through college, he or she realized how unrealistic a professional athlete career was and began to shift focus toward academics and prepare for a more realistic career. During student-athletes' final one or two years in college, they readjusted

their athletic and academic goals and became less willing to make sacrifices solely for athletics and were more concerned with academic success and career preparation (Miller & Kerr, 2002).

This section presented multiple reasons why student-athletes may have experienced delayed career development or progressed through multiple stages of role identity throughout the college years. The main reasons leading to delayed career development were lack of time to devote to activities other than sports, extensive assistance from academic support services personnel, realization that participation in professional sports was not a career option, and identity foreclosure. The following section introduces a relatively new instrument in career development, the Occupational Engagement Scale-Student, which was predicated on the theory that decision-making was a combination of conscious and experiential processes.

Occupational engagement

Vocational identity was rooted in the early theories of vocational psychology, particularly those of Parsons that led to the trait-factor theory and the more contemporary person-environment theory of Holland. At the core of these two instruments was the rationale that individuals fit some occupational pursuits better than others based on their interests, values, and personality. The decision-making process was not as rational as once perceived (Krieshok, 1998). Instead Krieshok concluded, "most processing performed by the human mind for decision making and behavior initiation was not performed at the conscious level, and that reflection on those decision-making processes was not only futile, but possibly confusing and detrimental to good decisions" (p. 217).

Based on the cognitive-experiential self-theory, when decisions were made, people used the experiential system first followed by the rational system as determined by the situation (Krieshok, Black, & McKay, 2009). Bubany et al. (2008) found that college students' perceptions of career decision-making were consistent with alternative models of career decision-making. Results of their study revealed that college students valued intuition, experience, interdependence, and emotions when making career decisions, which was consistent with unconscious models of career decision-making.

Krieshok, Black, and McKay (2009) developed the model of adaptive career decision-making based on a review of empirical research that suggested the decision-making process was not an exclusively rational process. Instead, consistent with cognitive-experiential self-theory, the trilateral model proposed that two modes (i.e., rational and experiential; in other words, conscious and unconscious) of processing were used in the decision-making process. Occupational engagement was the foundation of the trilateral model because while "reason and intuition play critical roles in career decision making, they (reason and intuition) both depended on occupational engagement as the behavioral tool leading to their full development and optimal tuning" (Krieshok, Black, & McKay, 2009, p. 284). Adaptive career decision-making referred to enhanced decision making through the accumulation of information (reason), experience (intuition), and engagement. Students needed to learn to think and experience in more intentional ways to gain the maximum knowledge to use when making decisions (Krieshok, Black, & McKay, 2009).

Occupational Engagement correlated positively with rational and intuitive thinking styles, vocational identity, openness, conscientiousness, extraversion, and agreeableness (Black, 2006). Cox (2008) supported the argument that occupational engagement was important to college students when he found occupational engagement significantly related to specific

measures of college success, grade point average, and personal development. Cox also found that students were more likely to have greater satisfaction with life if they were occupationally engaged. Occupational engagement resulted from participating in behaviors that contributed to the information and experience of individuals so there would be enough prior knowledge available for use when the time came to make career decisions.

To summarize the literature, athletic identity was a self-concept that referred to how an individual related to an athletic role. The Athletic Identity Measurement Scale was used to see if there was a correlation between athletic identity and career development. In past studies males were found to have stronger athletic identities than did females. Identity foreclosure occurred when individuals prematurely made a commitment to roles without exploring internal needs or values. Student-athletes were prone to experience identity foreclosure because of early athletic success or talent as they often committed to the role of athlete and seldom explored other potential interests. Due to dreams of playing professional sports, many student-athletes failed to pursue other interests until later in college when they realized those dreams would not become realities. Another reason for identity foreclosure occurred when student-athletes only associated with or spent the dominant portion of time engaged in sports and with teammates. Research pointed to a multi-stage identity role focus or career development in student-athletes. Student-athletes tended to focus on the athletic role their first two years of college and neglected or spent less time on their academic roles. As student-athletes progressed to their final year or two of college, for many the focus adjusted and more time was spent on academics and career preparation. This could have happened for a variety of reasons. Some researchers thought academic support services personnel were too controlling of student-athletes' time and lives. For example, a coach or academic advisor may have selected what courses a student-athlete took or discouraged a student-athlete from a specific major if courses interfered with practice times or sport commitments. Lack of free time also may have limited a student-athlete's career development. Often student-athletes considered themselves athletes first and students second. Individuals did not invest their identity or self-involvement in all roles equally.

Methodology

This research studied student-athletes and non-athletes attending 1 of the 120 FBS institutions. During the spring semester of 2011 approximately 500 FBS student-athletes from a Midwest public university were invited via email to participate in this study. Participants included grant-in-aid and non-grant-in-aid male and female student-athletes. This university's full-time (enrollment of 12 or more credit hours) undergraduate enrollment for the main campus was approximately 17,813 (51.7% male; 48.3% female).

Non-athlete participants (n=277) were solicited from 12 courses selected by the researcher in an attempt to have a sample demographically similar to student-athletes. All athlete and non-athlete participants were between the ages of 18 and 25. Participation was voluntary and anonymous, and all participants read an informed consent statement as required by the institution's Human Subjects Committee prior to completing the electronic survey.

Athletic identity measurement scale

Athletic identity was assessed using the Athletic Identity Measurement Scale that measured the degree to which an individual identified with the athletic role (Brewer, Raalte, & Linder, 1993). The Athletic Identity Measurement Scale provided a rapid, reliable, and valid tool for assessing an important aspect of personalities (Brewer &

Cornelius, 2001). Cornelius (1995) suggested that a strong athletic identity as measured by Athletic Identity Measurement Scale was “a more useful distinction for examining developmental implications of participating in sports than an athlete/non-athlete dichotomy” (p. 561). If individuals had strong athletic identities, they valued participation in sports and their athletic roles were of high importance as their self-perceptions revolved around their athletic abilities (Brewer, Raalte, & Linder, 1993). The Athletic Identity Measurement Scale, a seven-item quantitative inventory that used a seven-option Likert scale ranging from “Strongly Disagree to Strongly Agree,” measured how much an individual agreed or disagreed with his or her role as an athlete. The more an individual agreed with a statement, the higher his or her score. A few examples of the Athletic Identity Measurement Scale statements were *I consider myself an athlete* and *I feel bad about myself when I do poorly in sport*.

The Athletic Identity Measurement Scale has been established as a reliable and an internally consistent measure of the construct of athletic identity. Initial validity testing for the Athletic Identity Measurement Scale (Brewer, Raalte, & Linder, 1993) found a coefficient alpha ranging from .87 to .93 and a test-retest over a 14-day period reliability coefficient of .89. Construct validity was also demonstrated by showing mean scores on the Athletic Identity Measurement Scale that increased with level of athletic involvement. According to Li (2006), internal consistency for the Athletic Identity Measurement Scale was acceptable with Cronbach's alphas ranging from .81 to .86. By 2006, use of the Athletic Identity Measurement Scale had been cited 70 times in academic literature (Nasco & Webb, 2006).

My vocational situation

Permission to use the Vocational Identity of the My Vocational Situation was granted by the author, Mark L. Savickas. The Vocational Identity is an 18-item true or false scale used to assess if individuals possessed a “clear and stable picture of their goals, interests, personality, and talents” (Holland, Daiger, & Power, 1980, p. 1). Examples of questions included *I need reassurance that I have made the right choice of occupation* and *I am not sure that my present occupational choice or job is right for me*. Over 50 studies with college students and adult participants using the Vocational Identity Scale had been published by 1993 (Holland, Johnston, & Asama, 1993). The Vocational Identity Scale was positively correlated with age and education or specific job-related training (Holland, Daiger, & Power, 1980). The Vocational Identity Scale also positively correlated with the Career Maturity Inventory scale (Leong & Morris, 1989).

Individuals with a strong vocational identity had confidence in their abilities to make good decisions and had less trouble making career decisions (Holland, Daiger, & Power, 1980). The Vocational Identity Scale also was associated with occupational commitment, life satisfaction, well-being, and career decision-making self-efficacy (Nauta, 2010). Internal consistency reliability coefficients ranged from .84 to .94 for the Vocational Identity Scale (Holland, Daiger, & Power, 1980; Holland, Johnston, & Asama, 1993; Lewis & Savickas, 1995; Strauser, Lustig, & Ciftici, 2008). Test-retest reliability was .75 for the My Vocational Situation over a time period of three months (Holland, Johnston, & Asama, 1993).

Occupational engagement scale-students

The Occupational Engagement Scale-Students was used with the permission of the developer, Thomas S. Krieshok. Occupational engagement was defined as “taking part in behaviors that contribute to the career decision-maker’s fund of information and experience of the larger world, not just the world as processed when a career decision is imminent” (Krieshok, Black, & McKay, 2009, p. 284). The Occupational Engagement Scale-Student, a 14-item scale correlated with many variables seen as desirable in college students and had not been used with student-athletes. The instrument used a five-option Likert scale from “Not at all Like Me, Somewhat Like Me, and Very Much Like Me” to indicate how well the statement described each of the desirable statements. Examples of the statements included *I am actively involved in groups or organizations, I attend lectures, exhibits, and community events, and I visit places I’m interested in working at so I can learn more about them.* The mean score on the Occupational Engagement Scale-Student was 32.53 with a standard deviation of 9.47 for the 311 college students in Cox’s (2008) study. The Occupational Engagement Scale-Student shared the following positive statistically significant correlations at the .01 alpha level with these variables desirable in college students: general education (.34); personal development (.42); science and technology (.29); intellectual skills (.44); practical and vocational competence (.47); college grade point average (.19); vocational identity (.31); and satisfaction with life (.21) (Cox, 2008).

Procedures

The University’s Office of Institutional Research and Planning provided demographics of the 2010-2011 student-athletes to the researcher. Based on the demographics of student-athletes, specific courses offered during the spring semester of 2011 were selected, and instructors were asked to invite their students to participate in this study. The course instructors who agreed to assist sent email messages to their students requesting voluntary participation in the study. Course instructors had the option to forward an email message that included an informed consent statement, a description of the study with instructions, and a link to the online survey. It was hoped that participation would be increased by the convenience of electronic data collection. However, because of an anticipated lower response rate, the number of non-athletes invited to participate in the survey was greater than the number of student-athletes.

Design and analysis

Prior to data analysis, reliability was demonstrated for all three instruments by measuring for internal consistency with the sample. Cronbach’s alpha was calculated for each scale to verify that the internal consistency for the sample used in this research project was consistent with the Cronbach’s alpha found in past research samples. Descriptive statistics were used to determine the means and standard deviations. An alpha level of .05 was set for all data analyses. Analyses of Variance were used to compare student-athletes and non-athletes on each instrument. In addition, Analysis of Variance was used to compare male and female student-athletes on each instrument and to compare year one and year two student-athletes with year three and year four student-athletes. Correlations were run to determine if any relationships existed between Athletic Identity Measurement Scale and each measure of career development, Vocational Identity and Occupational Engagement Scale-Student.

The Athletic Identity Measurement Scale demonstrated the highest measure of internal reliability with a Cronbach's Alpha measurement of .92. Vocational Identity Scale of the My Vocational Situation had a Cronbach's alpha of .89 for the sample; Occupational Engagement Scale-Student measured at .88.

Results

Table 1 shows the demographic frequencies of non-athletes and student-athletes for the sample. There was no relationship between athletic identity and vocational identity nor was there a relationship between athletic identity and occupational engagement. Table 2 shows the non-athlete and student-athlete means and standard deviations for the Athletic Identity Measurement Scale, Vocational Identity Scale of the My Vocational Situation, and Occupational Engagement Scale-Student by year and gender.

Table 1

Student-Athlete and Non-Athlete Demographics

Characteristic	Student-Athletes	Non-Athletes
Gender		
Male	40	105
Female	69	172
Year		
Year 1	39	58
Year 2	22	91
Year 3	27	72
Year 4	16	47
Ethnicity		
American Indian	1	0
Asian	1	8
Black	10	8
Hispanic	3	6
Native Hawaiian Pacific Islander	1	2
White	88	249
Multiple Ethnic	4	5

Table 2

Means and Standard Deviations for Scores by Gender on the Athletic Identity Measurement Scale, Vocational Identity Scale of the My Vocational Situation, and Occupational Engagement Scale-Student

			Males			Females		
			AIMS	VI	OES-S	AIMS	VI	OES-S
Student-Athletes	Year 1	<i>n</i>	16	16	16	23	23	23
		<i>M</i>	42.25	12.06	39.00	37.30	10.30	44.17
		<i>SD</i>	6.93	5.66	11.90	6.42	5.30	10.82
	Year 2	<i>n</i>	8	7	8	14	14	14
		<i>M</i>	42.50	13.86	44.00	37.93	11.21	42.29
		<i>SD</i>	5.98	2.73	5.35	5.69	5.18	7.08
	Year 3	<i>n</i>	10	10	10	17	17	17
		<i>M</i>	37.30	10.30	45.90	32.71	13.18	50.59
		<i>SD</i>	9.25	6.20	8.47	5.73	3.70	11.24
Year 4	<i>n</i>	4	4	4	12	12	12	
	<i>M</i>	38.25	11.50	42.50	37.92	12.75	52.25	
	<i>SD</i>	10.81	4.80	5.45	7.60	4.09	7.83	
Non-Athletes	Year 1	<i>n</i>	15	15	15	42	42	43
		<i>M</i>	30.60	11.13	50.13	24.31	10.81	51.02
		<i>SD</i>	8.99	6.17	11.18	9.09	5.16	8.61
	Year 2	<i>n</i>	38	38	38	53	53	53
		<i>M</i>	29.32	8.29	45.13	20.94	10.36	49.23
		<i>SD</i>	8.05	4.97	7.41	9.12	5.04	8.24
	Year 3	<i>n</i>	34	34	34	37	37	37
		<i>M</i>	27.50	9.65	47.59	21.41	11.68	47.46
		<i>SD</i>	9.83	5.29	10.67	8.72	4.31	7.45
Year 4	<i>n</i>	15	15	15	32	32	32	
	<i>M</i>	24.80	10.73	46.13	19.53	10.38	47.87	
	<i>SD</i>	9.04	5.65	6.95	10.45	5.02	11.78	

Note. AIMS = Athletic Identity Measurement Scale, VI = Vocational Identity of the My Vocational Situation, OES-S = Occupational Engagement Scale-Student

Student-athletes had significantly higher vocational identities than did non-athletes, $F(1, 383) = 5.782, p < .05$, eta square = .015. Non-athletes had significantly higher occupational engagement scores than did student-athletes, $F(1, 385) = 6.247, p < .05$, eta square = .016. The difference was considered small (see Table 3).

		Student-Athletes (<i>n</i> = 109)	Non-Athletes (<i>n</i> = 277)
AIMS	<i>M</i>	37.97*	24.18
	SD	7.36	9.74
VI	<i>M</i>	11.65*	10.27
	SD	4.86	5.12
OES-S	<i>M</i>	45.29*	48.00
	SD	10.08	9.36

Note. N = 386; N = 109 student-athletes; N = 277 non-athletes; * $p < .05$, AIMS = Athletic Identity Measurement Scale, VI = Vocational Identity of the My Vocational Situation, OES-S = Occupational Engagement Scale-Student

A Multivariate Analysis of Variance was conducted with gender and athlete status as the independent variables and Athletic Identity Measurement scores, Vocational Identity scores, and Occupational Engagement scores as dependent variables. The independent variable of gender caused significant differences in the measurement scores, Wilks' $\Lambda = .89, F(3,378) = 15.50, p < .05$. The independent variable of athlete status also caused a significant difference in the measurement scores, Wilks' $\Lambda = .63, F(3,378) = 75.36, p < .05$. However, there was no interaction effect between gender and athlete status. The results showed that male student-athletes had significantly higher athletic identity levels than did female student-athletes, $F(1, 107) = 11.321, p < .05$, eta square = .096. The difference was moderate to large. However, female student-athletes did not have significantly higher vocational identity scores than male student athletes, $F(1, 106) = .001, p > .05$, eta square = .001. The results showed that female student-athletes had significantly higher occupational engagement scores than did male student-athletes, $F(1, 107) = 4.845, p < .05$, eta square = .043. The difference was considered moderate. Table 4 provides the athletic identity, vocational identity, and occupational engagement means for male and female student-athletes.

Table 4
Student-Athlete Career Development Gender Comparisons

		Males	Females
AIMS	<i>M</i>	40.95	36.35*
	SD	7.84	6.53
VI	<i>M</i>	11.67	11.64
	SD	5.27	4.65
OES-S	<i>M</i>	42.55	46.88*
	SD	9.44	10.17

The omnibus F-test showed no overall significant differences among vocational identity means existed between years in college, $F(3, 99) = .463, p > .05$, eta square = .014. Student-athletes in years three and four did not have significantly higher vocational identity than student-athletes in years one and two, $F(1, 101) = .717, p > .05$, eta square = .007. As shown in Table 5, student-athletes in years three and four had, on average, higher vocational identity scores than in years one and two, but the differences were not significant.

Table 5
Student-Athlete Mean Comparison by Group

		Years 1 and 2	Years 3 and 4
VI	<i>M</i>	11.40	12.23
	SD	5.16	4.57
OES-S	<i>M</i>	42.36*	49.21*
	SD	9.86	9.59

Note. N = 109; * $p < .05$, VI = Vocational Identity of the My Vocational Situation, OES-S = Occupational Engagement Scale-Student

The omnibus F-test showed that overall a significant difference among occupational engagement means existed between years in college, $F(3, 100) = 4.145, p < .05$, eta square = .111. The omnibus eta squared was described as medium to large. Since the omnibus F-test yielded a significant difference, Fisher's Least Significant Difference post-hoc test was conducted to examine in what years the significant difference existed. The results showed a significant difference between student-athletes in year one and year three and in year four and

between student-athletes in year two and year three and year four ($p < .05$). As student-athletes advanced in year in college, the mean Occupational Engagement Scale-Student value also increased. The occupational engagement means and significance levels for student-athletes are shown in Table 6.

Enrollment Year	Mean	Enrollment Year	Mean Difference	Significance
Year 1	42.05	Year 2	-.86	.744
		Year 3	-6.80*	.007
		Year 4	-7.76*	.009
Year 2	42.91	Year 1	.86	.744
		Year 3	-5.94*	.038
		Year 4	-6.90*	.035
Year 3	48.85	Year 1	6.80*	.007
		Year 2	5.94*	.038
		Year 4	-.96	.757
Year 4	49.81	Year 1	7.76*	.009
		Year 2	6.90*	.035
		Year 3	.96	.757

Note. N = 109; *p < .05, the mean difference is significant at the .05 level.

Student-athletes in years three and four had significantly higher occupational engagement levels than did student-athletes in years one and two, $F(1, 102) = 12.451$, $p < .05$, eta square = .109. The difference was described as medium to large. Student-athletes in years three and four, on average, scored higher on the Occupational Engagement Scale-Student than did student-athletes in years one and two.

Discussion

This study found that student-athletes had significantly higher vocational identity scores than did non-athletes. These results differed from the findings of Kennedy and Dimick (1987), Martens and Cox (2000), Murphy, Petitpas, and Brewer (1996), and Sowa and Gressard (1983) who reported that student-athletes had lower levels of career development than did non-athletes. Students who scored high on the Vocational Identity Scale were vocationally mature, had constructive beliefs about career decision-making, were interpersonally competent, conscientious, responsible, did not have disabling psychological problems, and had a clear sense of self-identity (Holland, Johnston, & Asama, 1993). Vocational identity also was associated with occupational commitment, life satisfaction, well-being and adjustment, and career decision-making self-efficacy readiness (Nauta, 2010). The results of this study suggest that student-athletes may possess some of these characteristics (i.e., vocationally mature; interpersonally competent; conscientious; and responsible) since they had statistically significant higher vocational identities than their non-athlete peers.

However, the norms for vocational identity are 15.86 for male college students and 14.34 for female college students (Holland, Gottfredson, & Power, 1980). Compared to these norms, the male and female student-athletes in this study had significantly lower than average vocational identity scores as the highest overall vocational identity average was 13.86 (found in year two male student-athletes). Maybe, as Savickas (1990) suggested, student-athletes with lower vocational identity scores needed to be taught decision-making abilities related to the specification and implementation stages of the career decision-making process.

Another possibility is that since vocational identity measured how clear and stable a picture an individual had of his or her vocational future, perhaps student-athletes thought they had clear and stable career paths, such as continuing to compete in their sports after college as professionals or pursuing a coaching career. It may not be until later in college when student-athletes realized their chances of becoming professional athletes were nonexistent that they struggled to find their vocational identities. Potentially at the time in their lives when student-athletes realized their playing careers were coming to an end, these student-athletes' vocational identities were low; until that realization, if a student-athlete was convinced his or her career path was as a professional player or coach, he or she might maintain a higher vocational identity score.

This study found non-athletes had significantly higher levels of occupational engagement than student-athletes. As changes in the career patterns of individuals evolved over the past 20 years, so have the ways to measure career development. Occupational engagement resulted from participating in activities and engaging in behaviors that contributed to the information and experience of individuals so there would be enough prior knowledge available when time came to make future career decisions. The Occupational Engagement Scale-Student examined the diversity and extent of student-athletes' past experiences to assess if they had enough past experiences to make intuitive and rational decisions. Cox (2008) found the mean score on this scale was 32.53. However, the maximum score for occupational engagement in the Cox study was 56, while 70 was the maximum score possible in this study (Note: After completing his study, Cox increased the possible score). This variation in maximum score could indicate that student-athletes were provided with more opportunities to experience new things or interact with more diverse individuals. Typically, at most FBS institutions, student-athletes individually as well as with their teams were encouraged to participate in community service activities from reading programs for local elementary school students to conducting youth sport clinics to visiting hospitalized children.

The mission of the Student-Athlete Advisory Committee (SAAC) of the institution used in this study supported the development of occupational engagement since student-athletes were encouraged "to seek internal and external activities in order to create camaraderie and cohesion among teams and to create a positive image within the community" (Student-Athlete Handbook, p. 61). In addition to encouraging community involvement, it was common for student-athletes to have opportunities to travel and experience different cultures through sport. Teams traveled to compete against conference teams and other opponents. Sometimes teams got opportunities to travel internationally for competition (allowed by the NCAA once every four years) (National Collegiate Athletic Association, 2011). Promotion and encouragement of engaging in community service by the SAAC may be one reason the sample of student-athletes for this study had higher OES-S scores than the sample in Cox's (2008) study.

Student-athlete gender differences

Male student-athletes were found to have significantly higher athletic identity levels than female student-athletes which supported previous findings by Brewer and Cornelius (2001) suggesting male student-athletes identified with and put more emphasis on their roles as athletes. This could include spending more time and energy on their sports or athletic development. It also could lead to identity foreclosure at an earlier age. Because student-athletes with high athletic identities spent more time devoted to their sports, this may have led to identity foreclosure, meaning they spent less time and energy devoted to experiences and activities outside of sports.

In terms of career development, female student-athletes were found to have significantly higher occupational engagement levels than male student-athletes. Based on the definition of occupational engagement, since female student-athletes had higher levels of occupational engagement they may have had more diverse and broader past experiences that helped guide them in making career decisions. This may have meant they spent more time on activities outside of their sports, had a broader range of friends other than did male student-athletes, and focused more on hobbies and experiences. Also, female student-athletes may have participated in more varied activities that enriched their career exploration experiences than did male student-athletes. These experiences may have impacted student-athletes' career development differences over time, which will be discussed in the next section.

Multiple stage identity focus differences

This study found no differences between vocational identity scores as student-athletes progressed through college. This was not consistent with previous research (Blann, 1985; Chartrand & Lent, 1987; Lally & Kerr, 2005; Miller & Kerr, 2002, 2003) on multi-stage identity focus of student-athletes. These authors suggested that there was a distinctive career development difference between student-athletes in their early years of college compared to athletes in later years.

Student-athletes in years three and four had significantly higher occupational engagement scores than did student-athletes in year one. Student-athletes in years three and four had significantly higher occupational engagement scores than did student-athletes in year two. When student-athletes were grouped (i.e., years one and two; years three and four), a significant difference was found in occupational engagement scores. Student-athletes in years three and four had significantly higher occupational engagement scores than those in years one and two. This supported previous research by Blann (1985), Lally and Kerr (2005), and Miller and Kerr (2002, 2003) who found significant differences between identity focus for student-athletes in their earlier years of college compared to their later years.

The findings of Lally and Kerr (2005) supported multiple identity focus for student-athletes. Their research showed that in the early years of college student-athletes were unsure of their academic futures and more committed to their athletic identities. However, during the final year or two of college, student-athletes began to increase their focus on career plans. It appears, based on the results of this study, that student-athletes may have experienced a shift in career development levels between their early and later years in college.

There were multiple possibilities for why this may have occurred. First, some student-athletes entered college with dreams of playing professional sports. It may not be until later in their

college years that they realized playing their sports professionally were not viable options. It was at this time these student-athletes put more focus, time, and effort into their academic studies. One way to test this possibility would be to examine grade point averages, years in college, and career development measures. Two other reasons for delayed career development could be lack of time to devote to activities other than sports and extensive assistance from academic support services personnel. With little time to devote to other activities, including academics, student-athletes may have relied on others to remind them about assignments, tutors to explain confusing concepts from classes, academic advisors to schedule their courses, and someone to check to ensure they attended classes. While this type of assistance was helpful to student-athletes, it also may have caused delays in career development when they were provided so much assistance they no longer had to be held responsible for academic and life activities like their peers (Remer, Tongate, & Watson, 1978).

While it is helpful for student-athletes to receive academic support services, it seems student-athletes still need to be empowered to make personal decisions and accept responsibility for their actions. There seems to be a fine line between the academic support services personnel being overly helpful, thus potentially causing delayed career development, and providing an appropriate amount of academic and career development assistance. Student-athletes may need encouragement from academic support services personnel to actively seek job opportunities or interest areas before they get into the final year or two of college. This will help student-athletes focus on goals and life outside of sports. While the Athletic Identity Measurement Scale cannot be used to predict career development levels, it could still be used to identify students who may be prone to some of the negatives associated with a high athletic identity. The data from this study revealed student-athletes actually had higher levels of vocational identity. The academic support services personnel of the student-athletes' university may have contributed to their having higher scores than non-athletes. Student-athletes appeared to have clear and stable pictures of their future careers. Another area of focus for academic support services personnel is the continued encouragement of involvement outside of sports. Involvement in community activities, academics, career, interest areas, and interaction with a diverse population of students has been shown to aid in the development of a high occupational identity. The academic support services personnel could offer guest speakers from a variety of occupations and encourage student-athletes to seek information on potential future careers.

Conclusions

Results of this study suggested that there was no relationship between either athletic identity and vocational identity or occupational engagement. It also demonstrated that student-athletes at one institution competing in the FBS had significantly higher levels of athletic identity and vocational identity than did non-athletes. However, non-athletes had significantly higher levels of occupational engagement than did student-athletes. When conducting gender comparisons, the research showed that female student-athletes had significantly lower levels of athletic identity than did male student-athletes, but significantly higher levels of occupational engagement than did male student-athletes. Finally, this study concluded that student-athletes in years three and four had higher occupational engagement levels than did student-athletes in years one and two.

Although the generalizability of these findings was limited by the number of respondents at only one institution that competed in the FBS, there were important findings. Due to conflicting results involving past studies using the same or similar variables, the results of this study were important empirical findings since they supported the argument that there was no relationship

between athletic identity and career development. Future research could continue to focus on the career development of student-athletes to produce more applicable and conclusive results by examining additional variables such as grade point average, socioeconomic status, and time spent in sport participation. Another idea for future research is to collect data from male and female student-athletes and non-athletes at more than one university to increase generalizability of results. Finally, future research could examine the differences in career development among student-athletes involved in different sports. Using the variable of sports would be a valuable addition to this field of research and make for more comprehensive comparisons and results.

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