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### **The Effects of Sport Participation on Student-Athletes' and Non-Athlete Students' Social Life and Identity**

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*This study examined perceived athletic identity, sport commitment, and the effect of sport participation to identify the impact of athletic participation on college students. This study surveyed 163 student-athletes (59%) and 112 non-athlete students (41%) from a National Collegiate Athletic Association Division-I affiliated institution (males = 172, 62.5%; females = 103, 37.5%). The survey questionnaire was developed and modified from four well-established instruments, the Athletic Identity Measurement Scale, the Sport Commitment Model, the Life Roles Inventory-Values Scales, and Athletic Involvement on the Social Life. The data collection process was initiated and completed in the 2008 spring semester. Seven sub-factors: Personal Role, Importance of Sport, Personal Attributes, Expectation of Others, Core Benefits, Social Relationship and Special Behaviors, were identified through a series of factor analyses. The participants placed their athletic role highly and moderately agreed with the researchers' proposed core benefits of athletic participation. Overall, the findings supported past research in regards to gender and year in college difference, influence in perceived athletic identity due to sport specificity, and benefits of sport involvement. Variation in participants' responses based on different demographic characteristics, suggestions for improving current supportive programs, and direction for future studies are further discussed.*

### **Introduction**

**S**ince the creation of National Collegiate Athletic Association (NCAA) in 1910, college sports have gradually become an integral part of student life. As spectators or through direct participation, college sports can impact students in many different ways. Physical educators and sport experts would agree that athletic participation brings numerous physiological, psychological, educational and social benefits to the participants. These general benefits of athletic participation and spectatorship may include: (1) improving health and exerting students'

surplus energies; (2) obeying the competition or societal rules and constraining delinquent behaviors (such as cheating, acting violently, consuming illegal substances, and drinking excessive alcohol, etc); (3) promoting societal values, integrity and building character; (4) enhancing confidence, motivation, sense of empowerment, and self-esteem; (5) providing social interaction, fun and enjoyment; (6) offering opportunities for education and career in sports; (7) expanding life experience and making more friends; (8) knowing how to deal with failure and difficult situation, and (9) developing life-skills (Blinde, Taub, & Han, 1993; Coakley, 2007; Eitzen & Sage, 2008; Hudson, 2000; OPERD, 2004; Shaffer, & Wittes, 2006; Woods, 2006; Woodruff & Schallert, 2008). More specifically, many positive educational benefits were found to be associated with intercollegiate sport participation. Studies supported that collegiate student-athletes were often more engaged in academic and campus activities than their non-athlete peers (Wolniak, Pierson, & Pascarella, 2001; Umbach, Palmer, Kuh, & Hannah, 2006; Williams, Sarraf, & Umbach, 2006). Student-athletes were also more likely to transfer learned life and work skills, and self-esteem and character traits (i.e., integrity and work-ethics) into their chosen career fields (Spreitzer, 1994; Shiina, Brewer, Petitpas, & Cornelius, 2003; Weis, 2007). In addition, successful athletic programs that consistently win more games attract student-athletes and non-student-athletes with higher academic scores, hence improving the academics of the institution as a whole. (Mixon, Trevino, & Minto, 2004). Because there are so many educational benefits associated with athletic participation, Valente (2006), a professor of music, stated that her music students could certainly learn about skills and qualities such as setting goals, practicing diligently and being on time from student-athletes.

In contrast to the benefits of athletic participation, several specific studies examining the effect of athletic participation on cognitive learning of college student-athletes report different conclusions in opposition to the benefits that are listed in the aforementioned paragraph. These data indicated that athletic participation had either negative association or no effect on male collegiate student-athletes' academic motivation, development, and learning ability (Pascarella, Bohr, Nora, & Terenzini, 1995; Pascarella, Truckenmiller, Nora, Terenzini, Edison, & Hagedorn, 1999; Wolniak, Pierson, & Pascarella, 2001). Other studies also found that students who participated in intercollegiate athletics did not have a better GPA (Hood, Craig, & Ferguson, 1992; Shulman & Bowen, 2001) or greater outcomes in cognitive learning and motivation (Wolniak et al., 2001) when compared to those students who were not athletes. Therefore, it appears that the literature supports the notion that collegiate athletics in fact does have many benefits to the individual athlete and institution, but the extent to which the impact goes may not be concretely determined.

In addition to the educational benefits, participation in college sports is a unique privilege that only approximately 3% of college students are offered with an athletic scholarship to attend college (O'Shaughnessy, 2009). This privilege is supposed to be a fun and rewarding experience for student-athletes. However, unfortunately, that experience can often be tainted by an excessive emphasis on winning and commercialization (Eitzen & Sage, 2008; Herbert, 2005; Holms, 2007; Wolverton, 2009; Woods, 2006). Commercialization is evidenced when large college sport programs derive 60-80% of their revenues from commercial sources and corporate sponsors. It is also evidenced as millions of dollars are spent on the renovation and building of new sport facilities instead of increasing academic scholarships or educational funds (Herbert, 2005). The emphasis on winning is evidenced as more cheating and violations have been reported when recruiting and additional violations of academic fraud concerning student athletes' eligibility (Holms, 2007; Wolverton, 2009). An additional indicator that participation in athletics can

become tainted with emphasis on winning and commercialization is the high rate of turnover and escalated increases of salaries in coaching positions (Wolverton, 2009).

Additional negative consequences and psycho-social problems were found to be associated with collegiate athletic participation. Those problems included:

- (1) violence on and off the court (Fields, Collins, & Comstock, 2007; Jackson & Davis, 2000);
- (2) eating disorder (Grabmeier, 2002; Women Sports Foundation, 2004);
- (3) poor academic performance and low graduation rates among major revenue-generating sports (Eitzen & Sage, 2008; Shulman & Bowen, 2001; Miller, Melnick, Barnes, Farrell, & Sabo, 2005; Pascarella et al., 1995; Pascarella et al., 1999);
- (4) alcohol and performance-enhancement substance abuse (Bacon & Russell, 2004; Grossbard, Geisner, Mastroleo, Kilmer, Turrisi, & Larimer, 2009; Miller, Melnick, Barnes, Sabo, & Farrell, 2007
- (5) depression and burnout (Meyer, 1997; Coakley, 2007; Watson, 2006):
- (6) hazing (Alfred University, n. d.; Crow & Rosener, 2002; Hinkle, Smith, & Stellino, 2007);
- (7) gambling (Butts, 2006; Bacon & Russell, 2004); and
- (8) lack of social life and experience. (Brewer, Van Raalte, & Linder, 1993; Eccles & Barber, 1999; Miller & Kerr, 2003).

Although Shulman and Bowen (2001) highlighted the benefits of collegiate sports in their report, they further addressed how athletic intensification can deviate from the institutions' educational missions. Schools across the country are spending more money on recruiting less academically prepared student-athletes and building elaborate sport facilities, instead of utilizing their resources in funding academic/research scholarships or programs that will enhance the student-athletes' academic career.

If sport participation can actually benefit the athletes, why have problems related to athletic participation become so extensively documented? Are these problems merely over-rated because they occur with elite student-athletes in a few selected programs? Does athletic participation really bring positive benefits to the participants? To further understand the impact of athletic participation on college students (particularly the student-athletes), it may be vital to learn more about the participants' self-perceived athletic identity, sport commitment, and perceptions on the benefits of sport involvement, which are good indicators that reflect the effect of athletic participation.

### *Athletic Identity, Athletic Commitment and Impact of Athletic Participation*

An athlete's perceived level of athletic identity is an important measure for determining his/her sustainability in a sport. Athletic identity is a good indicator that shows how one's athletic involvement and experience can affect the person psychologically and cognitively. It can help determine one's changes and acceptance of certain beliefs throughout his or her entire athletic career (Miller et al., 2005; Miller, 2009). In general, athletes who have a prolonged sport career reflect a strong level of athletic identity (Anderson, 2004). Athletic identity could be developed and maintained by the influence of others as well as the athlete himself/herself. It was also found that significant differences in athletic identity may exist between genders and among

different racial groups (Miller et al., 2005; Miller, Sabo, Barnes, Farrell, & Melnick, 1998; Wiechman & William, 1997).

While developing the 21-item Athletic Identity Questionnaire (AIQ), Anderson (2004) found one's athletic identity was correlated to four specific factors: athletic appearance, importance of exercise, sports, and physical activity, competence, and encouragement from others. According to several studies, athletes' identity is empirically linked to health benefits, increase of sport participation, athletic performance, global self-esteem, development of social relationships and confidence (Anderson & Cychosz, 1990; Brewer et al. 1993; Horton & Mack, 2000; Marsh, Perry, Horsely, & Roche, 1995; Petitpas, 1978; Porat, Lufi, & Tnebaum, 1989), which are all identified as core benefits of athletic participation. Their athletic identity is also likely to be influenced by the values of the sport organization, as well as the sport and gender identities of the participant (Curry & Weiss, 1989). On the other hand, Miller et al. (2005) had also identified the development of "jock identity" while analyzing male athletes' perceived athletic identity. This unique approach to sport was positively associated with conformity to masculine norms, risk taking behaviors, and facilitation of both minor and major delinquency (Miller, 2008; Miller et al., 2007).

The question that follows then is: will there be any detrimental psychological or physical effect if an athlete exhibits a high level of athletic identity and sport commitment? Apparently, athletes with a strong athletic identity might tend to neglect other aspects of life in order to fulfill their athlete role, which can increase the potential risk of social problems (Brewer et al., 1993; Hudson, 2000). According to Brewer et al. (1993), the ratings of relative importance of two life-roles, extracurricular activities and friendship were found to be extremely low for a group of runners. However, Horton and Mack's study (2000) indicated that elite marathon runners did not have the same rating. This may indicate that some runners are still able to balance their social and athletic life without experiencing psychological distress. Weis (2007) also added that the student-athletes at women's colleges were more involved in academics, yet did not differ in the amount of time spent in extracurricular activities and in the total amount of student involvement. This may suggest that living a well-balanced academic, social, and athletic life can possibly be achievable ideology.

In addition to social issues, studies have shown that student-athletes often begin their college career with vague or nonexistent career objectives and invest heavily in their athletic roles (Lally & Kerr, 2005; Miller & Kerr, 2003). They juggle with dual-role identities, full-time athlete and full-time student, simultaneously in their early college years. As they become upperclassmen and complete their playing eligibility, they gradually choose to invest in the latter identity fully to explore non-sport career options (Wiechman & William, 1997). This suggestion may imply that student-athletes don't necessarily view playing sport as the most important or the only important activity in their lives.

Interestingly, female student-athletes claimed to have significantly less sexual activity than female non-athletes (Miller et al., 1998). However, male athletes reported to have slightly higher rates of sexual activity than their non-athlete counterparts. This statistic was supported by Hudson (2000), as 71% of his participants felt their sex life had been enhanced due to their athletic participation. Based on the results of these two studies, it is still difficult to conclude whether athletic participation can be a positive influence on student-athletes' social life or not.

Hinkle et al. (2007) pointed out that the athletes' high level of commitment to sport and athletic identity could be the contributing factors that force them to accept and justify hazing experiences. Other scholars take a different view and believe that a high level of athletic

identification and commitment can act as a vest to protect one from troubles (Grossbard et al., 2009). A popular assumption regarding the acceptance and justification of hazing was that college student-athletes were at risk for heavy alcohol consumption and related consequences. However, other studies pointed out that male athletes, who identified with higher levels of athletic identity, were protected from experiencing drinking-related consequences, the delinquent behaviors and the use of recreational drugs because of their commitment to sport (Grossbard et al., 2009; Hudson, 2000).

### *Research Purpose and Hypotheses*

Past research produced mixed conclusions when trying to generalize the benefits of athletic participation. A high level of identification to athletic roles was also associated with either positive or negative consequences through athletic participation. The researchers attempted to contribute to the existing findings by utilizing unique approaches to study the impact of athletic participation. Since athletic identity and the impact of sport participation have been investigated among intercollegiate athletes at elite Division-I, more academic-oriented Division-III, and women's institutions (Brewer et al., 1993; Griffith & Johnson, 2002; Mignano, Brewer, Winter, & Raatle, 2006; Richard & Aires, 1999; Williams, Sarraf, & Umbach, 2006), this study focused on a different group of participants, student-athletes from a regional public mid-major Division-I institute. Instead of using direct measurable variables, such as academic performance or skill sets, to examine the effect of athletic participation, this study utilized the participants' self-perceived ratings to interpret the participatory effect. The researchers purposefully chose student-athletes and physically active non-athlete students as participants because they were in a legitimate position to describe how their lives were impacted by athletic participation experience. The responses from both groups, the student-athletes and non-athletes students, were further compared and analyzed.

The results of the study may serve two objectives: (1) validating some of the well recognized perceived benefits of athletic participation, and (2) identifying the potential negative effects of athletic involvement in order to better support student-athletes and improve current services of the athletic program. The researchers' hypothesis is as follows: despite the probable negative outcomes associated with athletic participation, participants would be likely to recognize the strong effect of athletic participation on the core benefits, such as character building, improving academic inspiration and performance, and enhancing life-learning skills.

## **Methodology**

### *Participants*

A total of 275 students (males = 172, 62.5%; females = 103, 37.5%) from a Division-I affiliated institution participated in the study. The institution is a member of the Ohio Valley Conference with an enrollment size of approximately 9,300 students. Of the 275 students, 59.3% ( $n = 163$ ) were student-athletes who participated in NCAA sponsored varsity sports. The institution had a total of 322 registered student-athletes during the study duration. Of the 112 non-athlete students, nearly 54% of them ( $n = 60$ ) were former high school athletes and still actively participated in intramural sports on campus. Nearly 70% of the participants (both non-athletes and athletes) played in team sports such as football, basketball, volleyball, and baseball

for the university or intramural/community program. In terms of other notable characteristics of the sample group, approximately 57% of the participants were upper classmen (juniors or seniors). Forty-percent of the participants were majors in the College of Education, which is the largest academic cohort (Table 1).

Table 1 – *Characteristics of the Participants*

<b>Classification</b>	<b>Group and Number of Participants</b>
Class	(a) Freshmen = 75 (27.3%); (b) Sophomore = 43 (15.6%) (c) Junior = 66 (24.0%) (d) Senior = 91 (33.1%)
Major	(a) Art & Humanity = 10 (3.6%) (b) Education = 111 (40.4%) (c) Business = 51 (18.5%); (d) Tech. & Sciences = 34 (12.4%) (e) Social Sciences = 8 (2.9%); (f) Other = 61 (22.2%)
Sport	(a) Football = 79 (28.7%); (b) Basketball = 45 (16.4%) (c) Track and Field = 45 (16.4%); (d) Multiple sports = 25 (9.1%) (e) Softball = 14 (5.1%); (f) Soccer = 14 (5.1%) (g) Cheerleading = 9 (3.3%); (h) Baseball = 9 (3.3%) (i) Volleyball = 8 (2.9%)

### *Instrumentation*

In past studies, athletes' identity and commitment, which are generated and shaped through the involvement of a specific sport, had been selected as variables to understand how student-athletes value their athletic experience (Grossbard et al., 2009; Hudson, 2000; Lally & Kerr, 2005; Miller & Kerr, 2003). The researchers' intent was to validate the perceived benefits of athletic participation (athletic involvement) through the indirect measures of the aforementioned variables. To examine the effects of sport participation perceived by the participants, the researchers adopted four well-established instruments: (1) Athletic Identity Measurement Scale (AIMS) (Brewer et al., 1993; Wiechman & William, 1997; Horton & Mack, 2000), (2) The Sport Commitment Scales (SCS) (Horton & Mack, 2000; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993), (3) Life Role Inventory-Values Scale (LRI-VS) (Griffith & Johnson, 2002; Loo & Thorpe, 2000), and (4) Athletic Involvement on the Social Life (Hudson, 2000) to create a new 63-item survey questionnaire. For the purpose of the study, the researchers grouped all of the items into four categories: Demographic Information (5 items), Athletic

Identity (AI, 10 items) Sport Commitment (SC, 21 items) and Effects of Athletic Involvement (EAI, 27 items).

Three sets of reliability tests were performed to test the items in the latter three categories. Every category yielded a high level of Cronbach Alpha value ( $\geq .931$ ), which indicated a high level of consistency in participants' responses. The test-retest analysis of a sample group of 30 students also yielded a fairly strong correlation coefficient ( $r > .820$ ) as well.

### *Procedure*

The survey process began in January of the spring semester of 2008 and ended in June 2008 at the end of Summer School-Session I. The entire survey process took nearly six months to complete. All of the participants were invited to fill out the survey under one of the following three conditions. First, student-athletes were invited to participate in this study during their study hall sessions or prior to their team meetings. The Director of Athletics, coaches and Academic Coordinator of the institution assisted the researchers in soliciting responses from student-athletes. The non-athlete students were classified into two groups: (1) those that participated in interscholastic sports who were actively participating in intramural games; and (2) those who were non-participants or less active participants in the intramural games. The researchers also surveyed non-athlete students who were actively engaging in physical activity at the University Wellness Center or the Laughlin Health Gymnasium. With the support of instructors in general health classes, the researchers asked more students who tended to be less physically active to complete the survey.

### *Statistical Analysis*

The collected data were processed by the SPSS 12.0 software programs. Several analyses of variances (ANOVAs) and independent t-tests were utilized to compare the differences in athletic identity, sport commitment, and perceived benefits based on categorical variables, such as gender, class, type of sport and athletic experience. Factor analyses were used to categorize the participants' responses into detailed sub-groups. Correlation and regression analyses were used to interpret the relationships among three tested categories, athletic identity (AI), sport commitment (SC), and effects on athletic involvement (EAI).

## **Results**

### *Descriptive and Factor Analyses*

This study was designed to solicit the participants' honest responses regarding their perceived athletic identity, commitment, and judgment on the benefits of athletic participation. Based on the results of the factor analyses, seven new sub-factors were generated from the original three tested categories. Two major factors comprised the Athletic Identity (AI) category, personal role (PR,  $M = 3.86$ ) and importance of sport (IS,  $M = 2.92$ ). The Sport Commitment (SC) category could also be grouped into two factors: personal attributes (PA,  $M = 3.57$ ) and expectations of others (EO,  $M = 2.28$ ). The Effects of Athletic Involvement (EAI) resulted in three factors, core benefits (CB,  $M = 3.22$ ), social relationship (SR,  $M = 3.01$ ) and special behavior (SB,  $M = 1.96$ ). Factor loading of each tested category was greater than .72. This

revealed that the identified sub-factors could effectively represent the participants' actual attitude and perception under each tested category. The detailed results of all factor analyses are listed in Table 2.

Table 2 - Results of Factor Analyses

<b>Category (Loading)</b>	<b>Factor (% of variance)</b>	<b>Mean (SD) All Participants</b>	<b>Mean (SD) Athletes only</b>
Athletic Identity (.7264)	Personal Role--4 items (37.07%)	3.86 (1.12)	4.48 (.51)
	Importance of Sport--6 items (35.58%)	2.92 (1.12)	3.37 (.92)
Sport Commitment (.7593)	Personal Attributes--17 items (54.88%)	3.57 (1.24)	4.23(.61)
	Expectation of Others--4 items (21.05%)	2.28 (1.25)	2.69 (1.30)
Effects of Athletic Involvement (.7592)	Core Benefits--19 items (42.43%)	3.22 (1.28)	3.73 (.95)
	Social Relationship--4 items (18.07%)	3.01 (1.22)	3.55 (.91)
	Special Behaviors--4 items (15.43%)	1.96 (1.11)	2.19 (1.17)

Overall, the participants indicated they were proud to accept their role as an athlete ( $M = 4.23$ ) and did not view sport as the only important activity in their lives ( $M = 2.05$ ). They also rated highly on some of the core benefits of participation, such as improving health, overall development, and opportunities to meet others (mean scores  $\geq 3.63$ ). The top-3 highest and lowest scoring items among the categories, athletic identity, sport commitment, and effects of athletic involvement, are listed in Tables 3 and 4.

Table 3 - Top-3 Scoring Items among Three Major Categories

<b>Athletic Identity</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	I consider myself an athlete.	4.88
2	I have many goals that relate to sport.	4.64
3	Most of my friends are athletes.	4.53
<b>Group 2 Non-Athlete Students</b>		
1	I consider myself an athlete.	3.36
2	Most of my friends are athletes.	3.21
3	I have many goals that relate to sport.	2.97
<b>Sport Commitment</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	I have put a lot of time into playing my sport.	4.59
2	I feel proud to tell other people that I am a college athlete.	4.57
3	I would miss the good times of playing if I stop playing.	4.56
<b>Group 2 Non-Athlete Students</b>		
1	I would miss the good times of playing if I stop playing.	3.00
2	I would miss being a player if I stop playing.	2.96
3	I have put a lot of time into playing my sport.	2.94
<b>Effects of Athletic Involvement</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	My involvement in collegiate athletics has helped my health.	4.30
2	My involvement in collegiate athletics has helped my overall development.	4.29
3	My involvement in collegiate athletics has helped my opportunities to meet other friends	4.27
<b>Group 2 Non-Athlete Students</b>		
1	My involvement in collegiate athletics has helped my health	2.99
2	My involvement in collegiate athletics has helped my overall development.	2.81
3	My involvement in collegiate athletics has helped my confidence	2.75

Table 4 - *The Bottom-3 Scoring Items among Three Major Categories*

<b>Athletic Identity</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	Sport is the only important thing in my life.	2.37
2	I feel badly about myself when I do poorly in sport.	3.32
3	I spend more time thinking about sport than anything else.	3.39
<b>Group 2 Non-Athlete Students</b>		
1	Sport is the only important thing in my life.	1.58
2	I spend more time thinking about sport than anything else.	2.26
3	Sport is the most important part of my life.	2.30
<b>Sport Commitment</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	I feel I have to play to please my parents.	2.59
2	I feel I have to play so that I can be with my friends.	2.70
3	I feel I have to stay on the team so that people won't think I am a quitter.	2.74
<b>Group 2 Non-Athlete Students</b>		
1	I feel I have to play to please my parents.	1.56
2	I feel I have to play to please my head coach.	1.56
3	I feel I have to stay on the team so that people won't think I am a quitter.	1.75
<b>Effects of Athletic Involvement</b>		
<b>Group 1 Student-Athletes</b>		
<b>Rank</b>	<b>Item</b>	<b>Score</b>
1	My involvement in collegiate athletics has caused me using illegal substances/drugs.	1.96
2	My involvement in collegiate athletics has made me participate in delinquent behavior.	2.15
3	My involvement in collegiate athletics has helped build my acceptance of homosexuality.	2.25
<b>Group 2 Non-Athlete Students</b>		
1	My involvement in collegiate athletics has caused me using illegal substances/drugs.	1.47
2	My involvement in collegiate athletics has helped build my acceptance of homosexuality.	1.55
3	My involvement in collegiate athletics has made me participate in delinquent behavior.	1.65

### *Analyses of Variances*

The student-athletes' score on various factors in athletic identity, sport commitment and effects of athletic involvement (except Special Behaviors) were significantly greater than those of non-athlete students ( $p < .01$ ). As the participants' athletic experience and involvement in physical activity increased, the responses on all sub-factors also increased. For non-athlete students, the male participants' score on all seven sub-factors (PR, IS, PA, EO, CB, SR, and SB)

were significantly greater than those of females' ( $p < .01$ ). Among student athletes, male athletes' responses were significantly greater than female athletes' responses ( $p < .01$ ) in Core Benefits and Special Behaviors.

Interestingly, while conducting analyses based on students' educational backgrounds and activities of athletic involvement, the data revealed that upper classmen tended to have significantly lower scores than the freshmen and sophomores ( $p < .01$ ) in six of all seven sub-factors (except Special Behaviors). Students majoring in the College of Education tended to have significantly lower scores in all of the sub-factors as well.

Additionally, students who were involved in more than one sport also had lower scores in all of the seven factors. Participants who played team sports (football, basketball, and volleyball, etc.) had higher ratings in Personal Role, Personal Attributes, Core Benefits, Social Relationship and Special Behaviors when compared to those who played individual sports, such as track and field, cheerleading, and tennis. On the contrary, individual-sport participants had greater scores in the Importance of Sport and Expectation of Others categories when compared to the team-sport participants.

### *Correlation and Regression Analyses*

The relationships among athletic identity, sport commitment, and the effects of athletic involvement were analyzed through correlation analyses. In general, participants who had a high score in Personal Role were more likely to have a high score in Importance of Sport ( $r = .743, p < .01$ ), Personal Attributes ( $r = .878, p < .01$ ), Core Benefits ( $r = .663, p < .01$ ) and Social Relationship ( $r = .671, p < .01$ ). The participants' score on Core Benefits were highly correlated with Social Relationships (SR) ( $r = .803, p < .01$ ). This leaves one to perceive that SR may be the best predictor of participants' perception of Core Benefits and further study on this is needed.

## **Discussion & Conclusions**

The majority of the participants (81%,  $n = 223$ ) were student-athletes either in college or high school. It was therefore of no surprise that a high score in perceived athletic identity was noted. However, an interesting question to ask is, "Why is it beneficial to be a student-athlete?" Why did the participants value their role as an athlete? Even participants, who were not current student-athletes, claimed they missed "being a player" and missed "their playing time" (top-2 rated items in Sport Commitment by non-student-athletes in Table 3). Ratings of participants' sport commitment and perceived effects of athletic involvement clearly increased as their playing experience and skill level increased. The researchers perceived some special status must be associated with being a student-athlete, since many participants appeared eager to associate with the role. This indicated to the researchers that the participants in this study associated a positive image with the student-athlete title. It also made one speculate if this positive association is related to the statement, real men (or women) play sports.

A study of 538 collegiate athletes revealed that 33% reported being perceived negatively by professors and 59.1% by students. Furthermore, 62.1% reported faculty members had made a negative remark about athletes in class (Simon, Bosworth, Fujita, & Jensen, 2007). These numbers imply that student-athletes are probably not as positively received or popular as they believed would be. Surprisingly, the familiar negative stereotypes such as the dumb jock, class punk, and recipient of undeserved privileges did not seem to affect the participants in this current

study. They appeared to have a healthy and proper perspective about their athletic participation by not viewing sports as the only important part of their lives. Furthermore, they did not perceive that their athletic involvement would facilitate delinquent behaviors, either ( $M < 2.2$ ). Overall, the participants seemed to identify with a belief that athletic participation can do more good than harm. Athletes at this institution seemed likely to realize that their chance for having an athletic career at the professional level was slim. Hence they may take advantage of their athletic status to obtain other benefits, such as career preparation services, academic tutoring, and involvement in community services and practicums/internships, during their college career.

There were several findings in this study that support the conclusions of past research on athletes' identity and perceived benefits of athletic involvement. Similar to Anderson & Cychosz, (1990), Brewer et al. (1993), Marsh et al. (1995), and Petitpas, (1978), this study indicated that participants' athletic role (PR) was either highly or moderately associated with Personal Attributes of sport commitment and both factors of effects of athletic involvement, CB and SR. The rating of the core benefits of athletic involvement was at a moderate level ( $M = 3.22$ ). This value implied the participants somewhat agreed with the effects of sport involvement in developing health, work ethics, creativity, self-esteem, confidence, cultural acceptance, academic performance, and overall development, among other constructs. There were also significant differences within perceived identity, commitment, and effects of participation when analyzed by gender, grade level, and sport activities. This supports the results reported by Curry & Weiss (1989), Millert & Kerr, (2003), Miller et al. (2005), Wiechan & William (1997).

In this study, the female student-athletes had a similar level of commitment and perceived identity to their male counterparts. However, male athletes claimed to receive greater benefits from their athletic involvement. This is an interesting contrast when comparing these male athletes' responses to two studies conducted by both Miller et al. (2005) and Miller et al. (2009). Miller and colleagues generally found that male athletes were more likely to exhibit "jock" and delinquent behaviors instead of recognizing the positive effects of athletic involvement. Regardless of gender, the participants in this study did not perceive that involvement in sport would encourage the use of alcohol and illegal substances or engage in delinquent behaviors. This is certainly a positive response that those involved in the administration of college athletics at this university should embrace.

The significant differences in sub-factors such as the year in college somewhat reflects a gradual change in the participants' perception, perhaps due to the effect of maturation. From the results of this study, it appears that the student-athletes were strongly associated with their athlete role in their early years of college. Later, a "Deferred Role" was adopted which reflected an increased investment in academic and social roles during the participants' upper years (Lally & Kerr, 2005; Miller & Kerr, 2003; Wiechman & William, 1997). This concept, derived from previous studies, may explain the decrease seen in the level of commitment to sports and identification with the role of student-athlete as the participants in this study became upper classmen.

It is also important to note that in this study, the participants who played team sports clearly had higher ratings in PR, PA, CB, SR and SB. It is typically understood that the emphasis of team sports revolve around unity, teamwork, strong work ethics, character building, and supporting each other. These values are heavily embedded in most of today's team sports (Waldron, 2008). They are also recognized as the traditional and beneficial values of athletic participation. Perhaps we may assume that athletes who participate in team sports are more likely to be influenced by the traditional view of the "core benefits" of athletic participation. This result

is reflected by Riemer, Beal & Schroeder's comments (2000) regarding the influence of peers and the university culture on a team player's academic motivation, commitment to professionalism, and social development. Based on their finding, it seems reasonable to surmise that peer influence and team culture may play a role in encouraging an individual to accept the ideology and philosophy promoted by most of the teams, which align with the core benefits of athletic participation. The regression analysis also indicated that Social Relationships was the best predictor the participants' perceived Core Benefits. Based on the participants' viewpoint, the development of core benefits through athletic involvement seemed to go hand-in-hand with the enhancement of social relationships. This finding may make one reevaluate the importance and necessity of peer influence in the athletic setting once again.

In addition to team sports participants, individual sports participants also indicated some interesting conclusions. Individual sports participants in this study (mainly in three sports, track and field, cheerleading, and tennis) had higher ratings in Importance of Sport and Expectation of Others when compared to the team sports participants. This result may imply that they are often more serious about their participatory sport and need more extrinsic motivation to facilitate their commitment. Although the individual sports participants still join the team to compete; they may not experience the team concept and influence of peers in the same manner as team sports players. This finding not only reminds one that the formation of athletic identity and commitment is specific to the nature of sport activities, but that coaches and educators perhaps need to facilitate the unique value of individual-sport athletes.

Despite the participants' agreement with sport participation doing more good than harm, there are a couple of findings that are perplexing. (1) Why do students of College of Education have lower ratings in various sub-factors? And (2) if the participants' perceptions about athletic participation enhancing academic performance were accurate, why did team-sports players not exhibit better academic performance? In addition, it would seem likely that students in the College of Education would have most opportunities to learn the benefits of sport and physical activity. However, according to this study, they did not recognize the core benefits of sports and physical activity.

## Limitations & Recommendations

The primary limitation of this study is the homogeneity of the participants. Since the participants were selected based on their involvement in sports programs provided by the university, they could have received more coaching about the benefits of athletic participation and physical activity than non-athletic students. Therefore, their responses might be possibly more positively skewed in their beliefs of the benefits of sports and physical activity. In addition, the reliability of the participants' responses can also be affected by the self-reported method.

One of the important objectives of this study was to find out what the Athletic Department could do to better support its student athletes. Although the student-athletes of this study seemed to hold a healthy perspective regarding their athletic identity and commitment and recognize the positive benefits through their athletic participation, it is vital for the institute to ensure its student-athletes maintain a well-balanced athletic and academic role (Richard & Aires, 1999). According to Hass (2006), the administrators and faculty members of an institution can be most appropriate candidates to help their student-athletes balance their athletics and academics. Based on the researchers' conversation with the Athletic Director of surveyed institution, there is a program existed to support its students in career development and tutoring. However, the

program is not properly functioning and promoted due to the constrained budget. To maximize the service benefits of this program, the researchers have the following suggestions. (1) Collaborating with Faculty Athletic Representatives Committee to recruit volunteering junior faculty members, so they can render their tutoring services to student-athletes as a form of internal service; and (2) collaborating with the Office of International Student Services and the Office of Multicultural Student Services to plan cultural activities, such as food festivals, holiday celebrations, and educational seminars for cultivating students' social and cultural development.

The researchers would like to recommend two options concerning the direction of future studies on athletic identity and sport commitment. First, conducting a longitudinal study on athletes' perception throughout different stages of their sport involvement may allow the discovery of the impact of family influence, external social contexts, and internal psychological development on the change of athletes' view and values. And second, by surveying athletes who are affiliated with more competitive Division-I programs or professional teams, perhaps the future research may focus on the impact of media and commercialism on formation of one's athletic identity. In addition, the comparison of student-athletes' responses from small and large Division-I institutions can also be established.

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