

Predicting the Psychosocial Development of College Student-Athletes

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This study examined the extent to which sport classification, gender, race, and year in school predict psychosocial development in college student-athletes. Eighty-three student-athletes from an NCAA Division I institution completed the Student Developmental Task and Lifestyle Inventory (SDTLI). Senior nonrevenue sport participants reported higher levels of academic autonomy than did any other group. Gender, race, and year in school were significant predictors of individual psychosocial development on measures of mature interpersonal relationships, educational involvement, and academic autonomy. Counselors, psychologists, and student service providers should be sensitive to these developmental differences when conducting research and devising programming. Suggestions for future research and interventions with student-athletes are presented.

Nearly thirty years ago, Chickering (1969) suggested that educators view human development as the unifying educational purpose of colleges and universities in order "to encourage and enable intentional developmental change in students throughout the life cycle" (p. 2). Student service providers generally believe that there are many more consequences associated with the college experience than academic and intellectual development alone (Miller & Winston, 1990). Much learning that takes place during the college years is attributable to experiences outside the classroom (Springer, Terenzini, Pascarella, & Nora, 1995).

Among the developmental challenges faced by college students are to become more independent, to increase self-esteem and solidify one's personal identity, and to achieve intimacy with peers (Grayson, 1989; Pace, 1979). Young people of college age also strive to acquire more mature interpersonal relationships, learn various practical coping skills; identify a meaningful career path, define personal values, and shape a lifestyle that will positively influence life after college (Winston & Miller, 1987). This developmental perspective assumes that students with sufficient resources and support and exposed a wide array of challenging experiences will likely become well-functioning young adults.

The psychosocial development of college student-athletes has received an increasing amount of attention over the past decade (Etzel, Ferrante, & Pinkney, in press; Greenspan & Andersen, 1995). Various authors have been curious about the potential effects of athletic participation on the development of student-

athletes, especially those who are involved in highly competitive athletics (Chartrand & Lent, 1987; Coleman & Barker, 1994; Kennedy & Dimick, 1987). Professionals such as applied sport psychologists, advisors, and counselors who provide services and conduct programming designed to promote the personal-social, academic, and athletic development of student-athletes deal with the many and varied effects of sport participation on a daily basis.

Unfortunately, many college student-athletes who participate in highly competitive, so-called "revenue-producing" sports may have fewer opportunities to explore or engage in developmentally useful outside learning experiences compared to nonathlete peers or student-athlete peers involved in less demanding sports. This in turn may limit the extent to which they grow and mature in developmentally meaningful ways (Chartrand & Lent, 1987; Remer, Tongate, & Watson, 1978; Sedlacek & Adams-Gaston, 1992; Stone & Strange, 1989). Most student-athletes are subjected to rigorous time constraints that often prevent involvement in other extracurricular activities and relationships beyond the sport environment (Ferrante & Etzel, 1991). Much of their time is allocated to conditioning; practice; competition; travel; or interacting with teammates, coaches, and other student-athletes. While the National Collegiate Athletic Association (NCAA) limits involvement in sport-related activities to 20 hours per week, much more time is spent when the time associated with travel, rehabilitation, and ancillary sport-related endeavors is considered. The structure and isolation that characterize the student-athlete's lifestyle may not provide the necessary time or experiences to meet and grow from developmental challenges in ways similar to other students.

There is also evidence suggesting that some student-athletes enter college less developmentally mature than their nonathlete peers. Sowa and Gressard (1983) noted that while there were no significant differences in the overall achievement between the college student-athletes and nonathletes they studied, student-athletes scored significantly lower on the developmental tasks of educational plans, career plans, and mature relationships with peers. Using the Student Developmental Task Inventory (SDTI-2; Winston, Miller, & Prince, 1979), Blann (1985) reported that male undergraduate student-athletes had formulated less mature academic and career plans than college students in general. Lawrence (1985) further observed that student-athletes were functioning at a significantly lower level than a national sample on the development of autonomy, purpose, and mature interpersonal relationships subtasks as measured by the SDTI-2.

More recently, Bulling (1992) reported that participation in intercollegiate athletics appeared to negatively influence the Mature Interpersonal Relationships (MIR), Clarifying Purpose (PUR), and Academic Autonomy (AA) subtasks measured by the Student Developmental Task and Lifestyle Inventory (SDTLI; Winston & Miller, 1987). Brown (1993) observed that student-athletes who chose sport careers, and student-athletes in general, scored significantly lower in the three areas associated with career maturity on the SDTLI: (a) decision making, (b) world of work information, and (c) knowledge of preferred occupational group.

These findings point to the existence of a relationship between collegiate athletic participation and developmental delays in career and educational planning, autonomy, and interpersonal relationships. In general, it appears that many

student-athletes are less developmentally mature than many of their nonathlete peers—something that professionals who provide services to student-athletes should recognize and factor into their work.

While research has provided valuable preliminary information, further study is needed to better understand those factors that influence the psychosocial development of college student-athletes. One variable that warrants consideration is sport classification (i.e., revenue versus nonrevenue sports). According to Jordan and Denson (1990), student-athletes who participate in revenue-producing sports may be less able to be involved in the same developmentally useful experiences as their nonrevenue and nonathlete peers. In support of this observation, Brown (1993) reported that nonrevenue sport participants scored higher on all subtasks of the SDTLI than their revenue-producing counterparts. The purpose of this study was to examine the extent to which sport classification as well as other demographic variables (gender, race, year in school) predict the development of educational and career plans, mature interpersonal relationships, and academic autonomy of college student-athletes.

Method

Participants

Eighty-three varsity college student-athletes from an NCAA Division I-A institution volunteered to participate in this investigation. The volunteers were enrolled in various physical education classes during the spring semester in which the data were collected. The student-athlete sample consisted of 61 (73%) males and 22 (27%) females, a distribution that is consistent with the percentages of participants by gender at the institution. Forty-seven (57%) of the student-athletes identified themselves as Caucasians, while 34 (41%) were African-Americans. Forty-nine (59%) were revenue sport participants while 34 (41%) were nonrevenue sport participants. Revenue sports included football ($n = 27$), men's basketball ($n = 10$), and baseball ($n = 12$). Nonrevenue sports included women's basketball ($n = 7$), tennis ($n = 5$), and gymnastics ($n = 7$), and men's tennis ($n = 5$), track ($n = 3$) and wrestling ($n = 7$). Relative to year in school, 31 (38%) were freshmen, 22 (26%) sophomores, 22 (26%) juniors, and 8 (10%) seniors.

Instrument

Levels of psychosocial development were assessed by the SDTLI. The SDTLI is a 140-item, forced-choice (i.e., true/false) self-report inventory, based on Chickering's (1969) theory of developmental vectors. It provides scores on three developmental tasks: (a) Establishing and Clarifying Purpose (PUR), which is comprised of five subtasks: educational involvement, career planning, lifestyle planning, life management, cultural participation; (b) Mature Interpersonal Relationships (MIR), which assesses three subtasks (tolerance, peer relationships, and emotional autonomy); and (c) Academic Autonomy (AA).

The SDTLI has been frequently used to assess the psychosocial development of college students (Cheatham, Slaney, & Coleman, 1990; Jones, 1990;

Jordan-Cox, 1987; May & Logan, 1993; White & Strange, 1993). Winston et al. (1987) reported an internal reliability coefficient for the total inventory of .93 and test-retest reliability coefficients ranging from .89 to .74. Cronbach alpha reliability estimates provided by Winston et al. (1987) were .90 (PUR), .76 (MIR), and .70 (AA).

Procedures and Data Analysis

All participants were provided an informational letter describing the nature and purpose of the study. Participants provided consent to take part in the investigation by completing the SDTLI in a classroom environment. At no time were any potentially identifiable characteristics (e.g., name, student number, code numbers) associated with the testing materials. In this way, confidentiality of participant's responses was protected.

In order to assess the extent to which gender, race, sport classification (i.e., revenue versus nonrevenue), and year in school predicted various indicators of psychosocial development, independent stepwise multiple regression analyses were conducted. In accordance with previous research (Blann, 1985; Bulling, 1992; Lawrence, 1985; Sowa & Gressard, 1983), the MIR and PUR tasks, and the Educational Involvement (EI), Academic Autonomy (AA), and Career Planning (CP) subtasks served as the criterion variables. Stepwise, versus product-term hierarchical regression was employed because it permitted the determination of which factor explained the most variance relative to the other factors. Moreover, previous research has failed to demonstrate a consistent relationship between these variables within this population, thereby making the a priori prediction of the variable's ordering in the regression model difficult.

Results

Means and standard deviations of the dependent (criterion) variables are presented in Table 1.

TABLE 1
Mean Scores for Developmental Tasks and Subtasks

Developmental task	M	SD
Career Planning (CP)	8.42	3.91
Educational Involvement (EI)	8.19	3.75
Mature Interpersonal Relationships (MIR)	16.05	4.85
Clarifying Purpose (PUR)	33.52	11.28
Academic Autonomy (AA)	4.36	2.23

In order to determine if demographic characteristics (i.e., gender, race, rank, sport classification) of the sample affected SDTLI responses, a multivariate analysis of variance (MANOVA) was conducted. Follow-up univariate F tests were calculated when the obtained Wilks' Lambda values were statistically significant (see Table 2).

The results of these analyses revealed an interaction between year in school and sport classification, $F(3, 54) = 3.61, p < .05$. That is, senior nonrevenue participants demonstrated greater levels of academic autonomy than did any other group. A main effect for race, $F(1, 54) = 7.49, p < .05$, was also found for AA, indicating that African-Americans reported higher levels of AA than did their Caucasian counterparts.

TABLE 2
Mean Scores of Significant Interactions for Subtasks by Subgroup

	Year in school			
	Freshman	Sophomore	Junior	Senior
Academic Autonomy (AA)				
Revenue				
<i>M</i>	3.08	4.44	3.93	3.67
<i>SD</i>	2.07	1.42	2.27	2.50
Non Revenue				
<i>M</i>	3.00	4.83	4.60	7.00
<i>SD</i>	1.35	1.83	3.13	2.68
Educational Involvement (EI)				
Females				
<i>M</i>	10.33	9.00	12.00	11.50
<i>SD</i>	1.15	4.19	1.73	3.54
Males				
<i>M</i>	6.56	8.44	8.06	11.17
<i>SD</i>	3.22	3.97	4.08	3.92

Separate stepwise regression analyses were performed to determine the extent to which the demographic variables predicted developmental task achievement. The results of these analyses are presented in Table 3.

TABLE 3
Regression Coefficients for Significant Predictors of Developmental Tasks and Subtasks
($N = 83$)

Variable	<i>B</i>	<i>SE B</i>	<i>R</i> ²
Mature Interpersonal Relationships			
Gender	-3.033	1.481	.07
Academic Autonomy			
Race	-.872	.414	.07
Educational Involvement			
Year in school	1.079	.445	.09
Gender	-2.249	1.101	.06

Analyses indicated that for the MIR task, only gender, $F(1, 81) = 4.19, p < .05$, entered the equation, accounting for seven percent of the variance (see Table 4). Results indicated that women reported more mature development on this task. For the EI subtask, year in school, $F(3, 78) = 5.84, p < .05$, and gender, $F(2, 81) = 4.18, p < .05$, explained a combined total of 15% of the EI variance. This suggests that upperclass female student-athletes reported higher levels of educational involvement than did other women or male athletes.

With respect to the AA subtask, only race, $F(1, 81) = 4.43, p < .05$, entered into the equation accounting for seven percent of the variance. This indicates that African-American student-athletes reported higher levels of academic autonomy than did Caucasian student-athletes. None of the independent variables were shown to be valid predictors of either the PUR task or the CP subtask.

TABLE 4
Mean Scores of Significant Main Effects for the Mature Interpersonal Relationships (MIR) and Academic Autonomy (AA) Subtasks by Subgroup

Subtask	<i>M</i>	<i>SD</i>
Mature Interpersonal Relationships		
Males	14.89	4.99
Females	17.93	4.45
Academic Autonomy		
African-American	5.14	2.36
Caucasian	3.74	2.13

Discussion

This study investigated the validity of gender, race, year in school, and sport classification as predictors of psychosocial development of a sample of college student-athletes. The data revealed that the variables of gender, race, and year in school appear to be related to academic areas of development.

Winston and Miller (1987) suggested that accomplishment of the educational involvement subtask is characterized by well-defined educational goals, knowledge of available resources, and active involvement in academic life. For this sample, senior females demonstrated greater levels of educational involvement than did either underclasswomen or males. This finding supports Chickering's (1969) theory of development which proposes that academic achievements gain increasing importance as the student progresses through the college experience. As students approach graduation, they usually begin to focus more closely on their academic performance with the understanding that successful employment is often largely dependent on their accomplishments in the classroom. However, this study found that male student-athletes may not be as involved in their education as their female counterparts. It may be that male student-athletes do not take the initiative to insure the quality of their educational development, fail to take advantage of existing resources (e.g., academic support centers), and may not plan realistically for the future. Further, many male student-athletes unfortunately may be counting on the unlikely prospect of "going to the next level", that is, becoming involved in professional or elite amateur sports after college.

The data also revealed that senior nonrevenue participants and African-Americans displayed the greatest levels of academic autonomy. Winston and Miller (1987) suggested that mastery of this task provides individuals with the capacity to deal with ambiguity, to develop effective study habits, and to perform at academic levels that are consistent with student's perceived abilities. The finding that senior nonrevenue participants said they were more independent provides some support for the hypothesis that sport classification is related to the level of psychosocial development in college student-athletes (Jordan & Denson, 1990). The unique histories and lifestyles of participants in revenue-producing sports may limit their involvement or interest in the same growth-oriented experiences as their nonrevenue counterparts. It may also be true that revenue sport participants come to campus with less developed study habits and a lack of self-direction when it comes to academic pursuits and performance.

Results also indicated that gender is related to the development of mature interpersonal relationships. This developmental task is seen as a combination of the peer relationships, tolerance, and emotional autonomy subtasks. Female student-athletes in this sample tended to be more independent and trusting in their relationships, had greater acceptance of those with backgrounds and beliefs different than their own, were less dependent upon the reassurance and approval others, and were more confident in their decision making capabilities.

Implications

Overall, the results of this investigation indicate that college student-athletes seem to represent a more diverse population than previously assumed along the investigated dimensions. This suggests that the student-athlete/nonathlete-student dichotomy often used when conducting research or when devising support services may not be altogether appropriate. Rather, these data point to the need for specific developmental programs which are designed to meet the unique needs of individual student-athletes and others.

Just as all college students are not the same, not all college student-athletes are the same. Efforts should be made to provide a systematic method of evaluating the developmental status of individual student-athletes. Those who design and conduct student-athlete enhancement programs (e.g., NCAA Life Skills) and who provide support services should be sensitive to these individual differences. For example, it may be useful to administer instruments like the SDTLI to student-athletes at the beginning of each academic year (e.g., when they participate in preseason physical examinations) or at the end of their athletic careers (e.g., when seniors complete exiting student-athlete surveys).

While the data from this study provide some useful information that helps further understanding of the possible effects of gender, race, year in school, and sport classification on student-athlete development, they should be interpreted with caution. First, the internal validity of the data is rather limited. The descriptive design makes it difficult at best to make valid cause and effect inferences. Second, the sample sizes of certain subgroups may have been insufficient to fill certain cells (e.g., African-American, women). In addition, the characteristics of the student-athletes sampled may not be indicative of those of other Division I-A student-athletes. Third, the psychometric properties of the SDTLI may be somewhat questionable (Lantz, 1995). Lantz's principle components analysis of SDTLI items only partially supported the factor structure as originally reported by Winston and Miller (1987). For example, the EI and CP items failed to load as independent factors as originally hypothesized by the authors of the SDTLI. Rather, nine CP and five EI items loaded together on a single larger factor, which accounted for 13% of the total variance.

Certainly, the issue of college student-athlete development and the variables related to their achievement warrants further study. Those who wish to investigate this area in the future may benefit from the following: (a) the use of different designs that may permit the determination of causal relationships between variables, (b) sampling more participants so as to have better representation of all variable cells, (c) identification and inclusion of other potentially related variables (e.g., socioeconomic status), and (d) the use of other instruments to assess the developmental levels of these young people.

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