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Submission Guidelines for the Academic Athletic Journal

Audience

The primary audience of the Academic Athletic Journal is the membership of the N4A, that is, professionals providing counseling, life skills, and academic support services to student-athletes.

Purpose

The primary purpose of the journal is to assist its readers in providing the best possible counseling, advising, and life skills services to student-athletes. Toward that end, articles should add new knowledge, challenge existing opinion, and/or explain the implications of research. The arguments should be well-grounded in theory or research and clearly related to practice. Articles should be original and stimulating, written in a clear and concise style. Where applicable, authors should strive for methodological and statistical soundness, while avoiding unnecessary technical excursions.

Subject Matter

Relevant topics include, but are not limited to, the following: historical overviews of topics related to student-athletes; reviews of publications related to student-athletes; practical applications of theoretical or research-based conclusions; and research on student-athletes, including a full discussion of results and implications.

Do not submit a manuscript that has been previously published, is scheduled for publication elsewhere, or is being considered for publication elsewhere.

Review Process

Manuscripts will be reviewed through the blind review process by at least three members of the editorial board. Their comments will be sent to the authors along with recommendations for acceptance, rejection, or revision.

Manuscript Format and Style Guidelines

Manuscripts should be prepared utilizing the format and style described in the fourth edition of the American Psychological Association *Publication Manual*. Articles should be 1250-5000 words in length (i.e., roughly 5-20 pages of typed, double-spaced text) with ample margins for comments. Amplify the text with appropriate headings/subheadings, figures, and reference citations. The references and all figures and tables should be typed on separate pages in accordance with the APA *Publication Manual*. Submissions that deviate substantially from *Publication Manual* format will be returned to the authors.

Authors should avoid sexist language at all times and terms such as subject when describing research participants.

Manuscripts must include the following:

- (1) A separate title page with the names and institutional affiliations of the authors.
- (2) An abstract of 50-100 words that briefly summarizes the major points of the paper. The abstract should be typed on a separate page and appear after the title page.
- (3) A brief biographical sketch for each author. Sketches may be combined on one page, but must appear on a page separate from manuscript text.
- (4) A cover letter briefly describing the nature of the manuscript. Include relevant telephone and fax numbers and electronic mail addresses.

Articles may be submitted at any time; however for consideration for the fall issue they should be submitted no later than July 1, and for the spring issue no later than January 1.

Submit the original manuscript and three copies to: Eric Denson, Ph.D., Department of Intercollegiate Athletics, Graves Building Box 354070, University of Washington, Seattle, Washington 98195-4070.

Upon final acceptance of the manuscript for publication, authors should provide a copy of the final draft and the electronic version of the manuscript on computer diskette, formatted for Macintosh. Please do not submit diskettes prior to final acceptance.

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New Editor's Statement

Eric L. Denson
University of Washington

As I assume the editorship of the *Academic Athletic Journal*, this seems to be an appropriate time to share my aspirations for the *AAJ*. Before taking on that task, several "thank yous" are in order. First, I would like to thank Kathy Lyons, the former editor, for encouraging me to consider serving as the editor and generously sharing her wisdom and experience during the transitional period. It did not take me long to appreciate the magnitude of the position and the effort and dedication that were such key parts of her work as editor. Thanks are also due to Dr. Janice Jordan, mentor extraordinaire, for providing additional encouragement, the previous editorial board for their contributions, and finally to the University of Washington Department of Intercollegiate Athletics for financial and material support for this undertaking.

In many cases, a journal serves as the flagship for an organization. It is a major publication that represents one part of the organization that all of its members see, in contrast to events such as national conventions, whose influence is at times limited to those who attend. Perhaps more importantly, the journal is a document that represents the organization to those who are *not* members. The journal is often the first link between the organization and prospective members. In that regard it may serve—depending on how it is perceived—as an important resource and an enticement to pursue membership in the organization, which is important since strength in numbers is often a prerequisite to greater influence, and a strong and active membership is the lifeblood of any organization. Certainly, the N4A is no exception to that.

Apart from its value as a flagship for the organization, the journal is also an important disseminator of information. In this way, the journal is a forum for both research questions and application. It represents an opportunity to present the state of the art of knowledge in the field, and to do so in sufficient depth so that other professionals may apply that knowledge to their own institutional environments. The journal is also a way to stimulate thought and debate among professionals involved in providing support services to student-athletes.

With this issue, the *AAJ* ushers in several changes. The editor and composition of the editorial board have changed. Another change with the *AAJ* is the inclusion of an index of all articles published in the journal from 1986 to 1995. This index will be updated annually to reflect the articles published during the past year and should be useful to authors wishing to review the literature, as well

as new members wishing to know what has been previously published in the journal. The most obvious change, of course, is the cover. Even the best designs need to be changed occasionally in order to get people's attention. This seemed to be a natural time to redesign the cover, as well as the layout of the journal.

The basic philosophy of the journal has not changed, however. The primary audience remains the same—the psychologists, counselors, teachers, and advisors to student-athletes who make up the membership of the N4A—and the articles published in the journal will continue to emphasize that audience. As editor, I am committed to maintaining the readability of the journal's articles, while increasing the number and quality of scientifically rigorous submissions. Efforts will be made to expand the readership of the journal so that those currently lacking access to it will be able to gain such access, as the journal's contributors have important things to say that others should hear.

The purpose of the journal will continue to be publishing high quality articles that add to the knowledge base, challenge existing opinion, and explain the implications of research. Because ours is an applied field, articles considered for publication must clearly address practical applications as well theoretical foundations. As our field evolves, sharing information about what we do in our programs that works, and explaining the nuts and bolts of those processes remains an important task and one that this journal will ask its contributors to share in.

In closing, it is a privilege to serve N4A as the editor of the *AAJ*, and I look forward to hearing from lots of prospective authors. Thanks and enjoy!

Developing A Structured Career Orientation Program For First-Year Football Players

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Carol Schroeder
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Nineteen first-year football players participated in a year-long, structured career orientation program. Participants completed a series of career exploration activities, with a primary focus on self-assessment. Results showed significant gains in career decidedness, comfort level about choice of major, and knowledge about the process of selecting a major/career. The majority of the student-athletes believed that the program helped them learn more about themselves and possible majors/careers. The program received a strong endorsement from 16 participants who committed to voluntary participation in subsequent career planning activities.

Effective career orientation must provide more than occupational information and job search/interview skills; it must facilitate self-awareness and individual growth (Mosca, 1989; Muzcko & Thompson, 1994; Whitfield, 1988). To this end, career orientation programs should attempt to integrate concepts from career guidance research and developmental theory. It has been shown that student-athletes' attitudes about career planning, exploration, and knowledge regarding the world of work and decision-making principles do not differ significantly from those of students who do not participate in intercollegiate sports (Wooten, Usher, & Osborne, 1994). Undeniably, all college students need career guidance which facilitates a thorough, active exploration process, leading to informed and realistic choices of academic majors and career goals.

Student-athletes, however, face two constraints with respect to this exploratory career planning process. First, their practice and competition schedules often prevent them from participating in career orientation activities offered on campus and second, NCAA regulations, specifically the '25-50-75 rule of satisfactory progress, which narrow the window of opportunity for selecting or changing one's major. Another issue unique to career orientation for student-athletes is the need to address the topic of careers in professional sports in a realistic manner without devastating individual aspirations. It is imperative that student-athletes who entertain hopes of a professional sports career internalize the importance of identifying and pursuing a viable "Plan B" while enrolled in college. Given these specific needs of student-athletes, academic support programs must expand their traditional services to include career orientation programs which facilitate the exploration and decision-making process leading to individually appropriate and satisfying choices.

Considerations For Effective Career Orientation

A developmental approach requires that career orientation activities begin at the outset of the college experience. Particularly during the freshman year, students appear to engage in a great deal of reexamination of their values and perceptions of self in reaction to the challenges of the college environment. Erikson (1968) pointed out that the college years are a crucial time for exploration which will lead to change and increasing differentiation of identity. In young adults, the following four patterns of occupational identity resolution can be observed (Marcia, 1966, 1980): (a) "diffused" students are absolutely undecided about a major or a career goal, exhibiting neither exploration nor commitment; (b) "foreclosed" students have committed to a major/career goal, but have done so with little or no exploration of their own preferences or alternative choices (e.g., a student chooses pre-med because his parents are physicians); (c) students in "moratorium" are exploring their options, but have not yet committed to a choice; and (d) "achieved" students have explored their options extensively, chosen a major/career goal, and committed to it. Whereas most individuals progress along this continuum of identity formation during the college years, students who exhibit a chronic inability implementing decisions might remain in diffusion. Achieved occupational identity is rare among first-year college students. Structured career orientation programs during the freshman year can help individuals who are not yet identity-achieved confront this developmental task.

Effective career orientation should be multifaceted and address individual needs with respect to personality type, learning style, and cognitive level. Computer-assisted career guidance (CACG) has become popular in recent years. Four systems used frequently are DISCOVER, DISCOVER II, SIGI, and SIGI PLUS. Among the core elements of these computer programs are self-assessment of interests, values, and skills; generation of occupational alternatives; information about careers; orientation to the career decision-making process; and information about how to deal with barriers to career choice. In order to optimize the benefit of any CACG system, it should be combined with other, more traditional, career guidance methods, such as individual or group career counseling, self-directed career decision making, or curricular intervention (Garis, 1984; Pyle, 1985; Sampson, Peterson, & Reardon, 1989).

Career exploration activities should accommodate various personality types and learning styles in order to optimize students' continued involvement in the decision-making process. *Introvers* and *Feeling* types tend to prefer computer-assisted career guidance whereas *Extravers* and *Thinking* types tend to prefer faculty advising and testing services. *Judging* types are more likely to use all kinds of career services (Lenz, Reardon, & Sampson, 1993; Myers & McCaulley, 1985; Nelson & Roberge, 1993). The concrete, sensory, visual learner is more likely to prefer computer programs whereas the abstract, reflective learner will prefer gathering information from a variety of sources. Career orientation must match learning styles by providing a spectrum of activities, from concrete experience to reflective observation, abstract conceptualization, and active experimentation (Allyn, 1989). This task is complicated by cognitive and cultural factors.

Studies have shown that some students prefer computer-assisted career guidance over traditional methods (Miller, Karriker, & Springer, 1986; Yee & Pawlovich, 1988). CACG systems provide rather concrete, passive experiences whereas interest inventories involve more concentration and higher levels of cognitive functioning. Roselle and Hummerl (1988) found that college students with advanced cognitive development scores used the DISCOVER II system more effectively than their peers with lower scores. Rather than looking to the computer program for specific answers concerning their future actions, the former group used it as just another tool in the career decision process. Not surprisingly, students who are reasoning primarily at the concrete level feel more comfortable with computer programs than inventories and worksheets which require analysis and verbal abstraction. Given that hypothetical reasoning and abstract thought may not develop or become consolidated until late adolescence or early adulthood (Piaget, 1972), career orientation programs can introduce activities which challenge students to "stretch" their cognitive functioning to this next level. A cultural phenomenon must also be considered. More and more undergraduates seem to exhibit at worst deteriorating reading skills and at best little patience for this traditional way of collecting information. After all, they are the first generation which, from early childhood, has been familiar with computer technology, its immediate feedback capacity, and its entertainment value. In order to optimize individual growth, career orientation programs must challenge students to employ a variety of information sources, including the computer, in their decision-making process.

Purpose

With these considerations in mind, North Carolina State University developed a career orientation program for first year football players. Phase I of the program was recently implemented and is described below. The objectives for this program were as follows: (a) to integrate concepts from career guidance research and developmental theory; (b) to implement a multifaceted career orientation program which addresses individual needs with respect to developmental level, personality type, and learning style; and (c) to provide structured career orientation activities in order to facilitate personal growth and the decision-making process involved in selecting an academic major and exploring career goals.

Method

Participants

Twenty-two first-year football players (18 scholarship; 4 walk-on) started in the program. During the course of the year, three participants dropped out. Thus, complete data records for the year were obtained for 19 players (17 scholarship; 2 walk-on).

Procedure

At the beginning of the fall semester, participants were assigned to one of two smaller groups in order to increase the individual attention each could receive. These group assignments remained constant throughout the year; both groups completed identical agendas in bi-weekly one-hour meetings throughout both semesters. The majority of sessions were presented in a small group, open discussion format. Sessions were conducted by the second author and another staff member of the NCSU Career Planning and Placement Center. Schedule and location were convenient for the participants. All sessions were mandatory; however, as an incentive, student-athletes received study hall credit for their attendance. The authors developed seven career orientation sessions for each semester (see Table 1).

TABLE 1
Activity Schedule by Semester

Session	Topic
Fall	
1	Orientation and introductions. Preassessment (Career Analysis Worksheet I) and discussion of career goals.
2	Administration of Self-Directed Search (SDS).
3	SDS follow-up exercise and discussion of possible careers which match individuals' interests and work values.
4	Presentation by an FBI agent (large group).
5	Introduction to SIGI PLUS and discussion/analysis of individual career goals.
6	Discussion of completed SELF-ASSESSMENT and SEARCH sections of SIGI PLUS.
7	Wrap-up. Discussion of how all the pieces fit together for individuals. Mid-year assessment (Career Analysis Worksheet II).
Spring	
1	Administration of the Myers-Briggs Type Indicator (MBTI).
2	Large group discussion of MBTI results (explanation and identification of types).
3	Small group discussion of MBTI results (how it can help an individual select an appropriate career).
4	Discussion of SIGI PLUS assignment (students had completed the INFORMATION section of SIGI PLUS on a career they had selected from the list of occupations).
5	Discussion of current career choices as they relate to MBTI, SDS, SIGI, and other career information (large group).
6	Meeting at the Career Planning & Placement Center; locate information about careers of interest and possible summer employment.
7	Final discussion of what had been learned about self and careers of interest. Discussion of which major appeared to match personal characteristics and individual career goal(s). End-of-year assessment (Career Analysis Worksheet III).

Instruments

Self-Directed Search (SDS). Holland's (1985) instrument is a vocational counseling tool which enables individuals to identify their personality type (*Realistic, Investigative, Artistic, Social, Enterprising, Conventional*). The measure is based on the assumption that people prefer work environments which match their

personality style. Students first completed the assessment booklet consisting of 228 items which comprise four scales (activities, competencies, occupations, and self-estimates) and yield a three-letter summary code of the individual's personality type (e.g., SIA: a person who is Social, Investigative, and Artistic). Students then searched the 1,156 occupations of the Occupations Finder for those which matched their three-letter summary code. The fifth revision of the instrument yields improved internal consistency over previous versions, with alpha coefficients ranging from .49 to .93 for the four scales. The instrument's concurrent or predictive validity is comparable to that of other inventories of this type. As this instrument is self-administered, self-scored, and self-interpreted, the extent of an individual's exploration is self-directed. The current program used small group discussion as a follow-up exploration activity of individual SDS results.

Myers-Briggs Type Indicator (MBTI). Isabel Myers Briggs and her associates developed a classification system based on Jungian personality types (Myers & McCaulley, 1985). Table 2 presents a summary of the descriptions of the eight MBTI personality types. These eight types were combined into four scales containing opposite poles (E-I, S-N, T-F, J-P). Results are reported as four-letter codes (e.g., INFP) indicating an individual's four strongest personality type components. The instrument consists of 126 items for which participants indicated their preferences. Answers were recorded on a computer scoring sheet. For follow-up activities, each student received a report form which contained the his four-letter code, a graphic representation of his scores along the dimensions of the four scales, explanations for each of the eight types, and a chart listing the characteristics associated with each of the 16 possible codes. Internal consistency reliabilities are acceptable for five college student samples, with alpha coefficients ranging from .71 to .90 for the four scales. Test-retest correlations for college samples range from .60 to .91. The instrument's construct and predictive validity are thoroughly documented.

TABLE 2
Myers-Briggs Type Indicator (MBTI) Personality Types

Personality type	Code	Description
Extravert	E	Focuses on the outer world of people and things.
Introvert	I	Focuses on the inner world of ideas and impressions.
Sensing	S	Focuses on present and concrete information gained from his/her senses.
Intuitive	N	Focuses on the future, with an emphasis on patterns and possibilities.
Thinking	T	Bases decisions on logic and objective analysis of cause and effect.
Feeling	F	Bases decisions on values and subjective evaluation of person-centered concerns.
Judging	J	Favors a planned and organized approach to life and prefers to have things settled.
Perceiving	P	Favors a flexible and spontaneous approach to life and prefers to keep options open.

System of Interactive Guidance and Information (SIGI PLUS). The latest version of this computer-assisted career guidance system is the result of more than three decades of research and development. Sampson and Johnson's (1993) training resource guide provides an extensive citation list of the theoretical and research base which supports the development and utility of this system. SIGI PLUS offers users nine components (see Table 3). Advantages of the microcomputer version include the interactive, user-friendly nature of the system, the user's ability to work on any part of the system at any time, and the printouts which can be used for follow-up activities.

TABLE 3
SIGI PLUS Components

Component	Description
Self-Assessment	Examination of work-related values, interests, and skills.
Search	Selection of desired and undesired features in one's work, a list of occupations that match these features, and possible college major(s) for these occupations.
Information	Details about required skills, advancement, income, employment outlook, educational requirements, and work conditions for selected occupations.
Skills	Self-rating on skills required for a particular occupation.
Preparing	Information about typical preparation paths for particular careers, including educational requirements.
Coping	Strategies for dealing with preparation issues, such as time management, financing, etc.
Deciding	Questions for the decision process to commit to a particular career choice.
Next Steps	Strategies for putting the plan into action.
Printouts	Hard copy of all selected information.

Career Analysis Worksheets. Questionnaires were developed by the authors for three assessments throughout the school year. The preassessment instrument (Career Analysis Worksheet I), administered at the beginning of the academic year, was designed to identify (1) levels of decidedness about an academic major, (2) individuals' top three career choices, (3) comfort levels regarding choice of major/career, (4) perceived need for career orientation activities, and (5) the main source of influence on students' thinking about their future careers. Career Analysis Worksheets II and III (mid-year assessment and end-of-year assessment) were designed to measure (1) changes of level of decidedness and decisions about an academic major, (2) changes of top three career choices, (3) use of SIGI PLUS, (4) perceived knowledge about and comfort level regarding the occupational decision making process, (5) perceived learning about self and majors/careers due to the current program, (6) interest in follow-up activities, and (7) suggestions for improving the program.

Results

Preassessment results indicated that the majority of student-athletes who participated in this program perceived a need for career orientation activities at the outset of the academic year (see Table 4). At the beginning of the year, nine student-athletes had chosen a major. Their average level of certainty about this choice was moderate, with a mean of 2.44 on a scale of 1 (*not very*) to 3 (*very*). Ten participants (53%) listed parent(s) and three (16%) listed teacher(s) as the main source of influence on their thinking about career choices.

TABLE 4
Summary of Responses to Preassessment Questions (N = 19)

Item	Responses (in %)		
	Yes	Maybe	No
I feel comfortable about making a career choice.	26.3	57.9	15.8
I need more career information to help me make a good choice.	73.7	15.8	10.5
I need a clearer picture of what my interests are to make a good choice.	57.9	26.3	15.8
I need to have a clearer idea of my abilities, my strengths, and my weaknesses.	68.4	21.1	10.5
I would like to find out what careers match my interests, abilities, and personality.	73.7	15.8	10.5

Difference scores of paired observations on six occupational development items were analyzed from mid-year and end-of-year assessments (see Table 5). Significant gains were found by the end of the year in career decidedness ($t = -2.97, p < .01$), comfort level about choice of major ($t = -2.02, p < .025$), and perceived knowledge about selecting a major/career ($t = -1.68, p < .05$). No significant differences were found for knowledge of values, knowledge of abilities, strengths, and weaknesses, and information about careers of interest.

TABLE 5
Difference Scores for Occupational Development Items

Item	Mid-year assessment	Year-end assessment	<i>t</i>
Career Decidedness	3.16 (1.21)	3.84 (0.96)	-2.97***
Comfort Level about Choice of Major	3.21 (0.92)	3.68 (0.89)	-2.02**
Knowledge about Values	4.05 (0.91)	4.05 (0.85)	0.00
Knowledge about Abilities, Strengths, & Weaknesses	3.95 (0.97)	3.84 (0.83)	0.40
Information about Careers of Interest	3.42 (0.90)	3.63 (0.90)	-0.85
Knowledge about Selecting Major/Career	3.21 (1.03)	3.58 (0.84)	-1.68*

Note. *** $p < .01$, ** $p < .025$, * $p < .05$.

By the end of the year, all 19 participants indicated that the program had helped them learn more about themselves. Specifically, learning about self as a result of the career orientation sessions was rated *very much* by six players (32%), *much* by five players (26%), and *moderate* by eight players (42%). Although no significant difference was found, a comparison of the mean ratings revealed that perceived learning about self increased throughout the year. On a scale of 1 (lowest) to 5 (highest) for levels of perceived learning, means were 3.63 (SD = 0.90) at mid-year and 3.89 (SD = 0.88) at the end of the year. For perceived learning about majors/careers, a slight decrease was found from the mid-year to the end-of-year assessment, with means of 3.74 (SD = 0.93) and 3.63 (SD = 0.90), respectively. Means of perceived learning were compared for individuals who had used SIGI PLUS and those who had not used the system. Results showed that SIGI PLUS users had learned significantly more about themselves ($t = -3.54, p < .01$) as well as majors/careers ($t = -1.97, p < .05$) by the end of the year.

At the outset of the program, nine student-athletes (47%) indicated that they had selected a major, but two of these individuals indicated that they were considering a different major at that time. By year's end these two individuals had committed to a new major. Another two individuals abandoned their original majors and were undecided about a choice at the end of the year. The final assessment showed that 12 student-athletes (63%) had committed to a choice of major; 5 of these individuals had been undecided about a major at the beginning of the fall semester. An examination of the commitment to a major revealed that all eight patterns of individual decision making were exhibited (see Table 6). These patterns suggest ongoing developmental activity in every possible sequence within the sample population.

TABLE 6

Patterns of Change in Commitment to a Specific Academic Major

Preassessment	Mid-year assessment	Final assessment	Frequency
No	No	No	4
No	No	Yes	3
No	Yes	No	1
No	Yes	Yes	2
Yes	No	No	1
Yes	Yes	No	1
Yes	No	Yes	1
Yes	Yes	Yes	6*

Note. Yes = selected a major. No = no major selected yet. *For 2 participants, the actual choice of major had changed between assessments 1 and 3.

An examination of the specific choices of majors revealed an increase in the range of subject areas from 5 to 10 over the course of the year. Some student-athletes rejected their initial choices, either in favor of a new choice or in favor of being undecided (i.e., ready to look at new alternatives). Others identified an initial or new choice during the year, but abandoned that choice by the end of the year. Comments by several of these student-athletes revealed that fall enrollment in a course in the area of interest had led them to conclude that the subject area would be an inappropriate major for them. Finally, for several student-athletes, subject areas which they had not initially considered had emerged as the major of choice or the top consideration by the end of the year. These change patterns illustrate the dynamics of the occupational development process and reinforce the importance of exploration activities.

An examination of the top three career choices listed by participants throughout the year further supported the notion that occupational development occurs during the freshman year. Notably, the number of student-athletes who listed a professional football career as their first, second, or third career choice decreased from 8 to 3 over the course of the year. Sports-related career choices (e.g., professional agent, sports management) increased in frequency from 5 to 6 by mid-year, but decreased to 3 by the end of the year. Science and engineering decreased from 8 to 2, and communication decreased from 6 to 3. Business and accounting remained fairly constant, changing in frequency from 8 to 7 by the end of the year. The largest increases in career choice frequency occurred for education and social sciences (from 5 to 11). These patterns reflect important realizations about career choice (primarily that financial gain has to be balanced with personal satisfaction).

Given the small number of participants in this program, results from the Self-Directed Search and the Myers-Briggs Type Indicator did not lend themselves to systematic analysis. Most of the possible SDS and MBTI codes yielded single-subject cells. For the SDS, the most frequently found dominant personality types were *Realistic* (6), *Social* (4), and *Investigative* (3). MBTI results yielded 6

Introverts and 13 *Extraverts*. Of the *Extraverts*, 4 were classified as ENTP (logical thinkers who are outspoken and resourceful with new and challenging problems), 4 as ESTJ (practical realists who have a good head for business or mechanics and tend to apply themselves in areas of their interests), and 2 as ESTP (matter-of-fact, adaptable, hands-on; like mechanical things and sports, with friends on the side; can do well in math and science when they see a need). A surface comparison suggested that most individuals had expressed career choices that were potentially compatible with their personality types. This finding supports the conclusion that this program helped student-athletes learn more about themselves. Throughout the year, discussions incorporated individual SDS and MBTI results whenever possible for reinforcement of understanding of self and career choices. Furthermore, student-athletes' interest in their SDS and MBTI results as well as their active participation in the discussions of these results suggested that these tools served as effective catalysts for increased self-awareness and active involvement in the occupational decision making process.

Throughout the year, student-athletes participated actively in and exhibited positive attitudes about the program. Numerous follow-up conversations, usually initiated by the students, took place apart from the formal sessions, indicating cognitive processing of program activities and discussions. At mid-year, 9 student-athletes (47%) indicated that they were interested in participating in a job shadowing experience during the spring break of the subsequent semester. Strong interest in and commitment to this program were supported. At the end of the year, 16 student-athletes (84%) agreed to continue to participate in the career preparation process by participating in at least two career planning programs (e.g., resume workshops, career panels, internship information sessions, etc.) per semester for their remaining years at NCSU. These student-athletes also felt that the program should be offered again for the next group of freshmen.

Discussion

The first year of this career orientation program has supported the premise that occupational development is an issue of concern for first-year student-athletes. The first-year football players who participated in this program not only expressed a need for career planning activities, they also stayed actively involved in the program throughout the year. The strong endorsement of the program at the end of the year is taken as an indication that the participants have begun to internalize the notion that career planning is an ongoing process which requires commitment to continued exploration of and preparation for future occupational roles.

Overall assessment of the first year of this program supports the conclusion that structured career orientation activities benefited the student-athletes in the decision-making process about their majors and their future career choices. The developmental focus, the multifaceted nature, and the structure of this program were well received. The majority of participants indicated that the program helped them learn more about themselves and about majors/careers. Increased self-awareness is the foundation for the developmental task of occupational identity formation and considered to be closely related to the findings of significant gains over

the course of the year in career decidedness, comfort level about choice of major, and perceived knowledge about selecting a major/career. The absence of an increase in perceived knowledge about abilities, strengths, and weaknesses can be seen as an indication that increased exposure to career development issues promotes students' willingness to admit to uncertainty because they become more aware of what they don't know or don't do well in light of the newly discovered options. The developmental approach to career orientation requires a focus on the individual. A sense of security and equilibrium about knowing oneself allows individuals to turn their attention to matters external to the self, such as an academic major and future career goals. Without a well-established sense of self, decisions about career matters will be at best ill-connected to the needs and characteristics of the individual.

Phase I of this program will be repeated with the next group of first-year football players. The collection of comparative data over several years will help improve and refine the program. Finally, Phase II of this program will be implemented during the upcoming academic year in order to provide second-year career orientation activities for the current group. The goal is to continue development of the program for the next four years until a comprehensive 5-year career orientation model is completed. This final model will reflect a cooperative effort among campus units, effective utilization of community resources, and participation of former players.

References

- Allyn, D.P. (1989). Application of the 4MAT Model to career guidance. *Career Development Quarterly*, 37(3), 280-288.
- Erikson, E.H. (1968). *Identity: Youth and crisis*. New York: Norton.
- Garis, J., & Harris-Bowlsbey, J. (1984). DISCOVER and the counselor: Their effects upon college student career planning progress. *ACT Research Reports*, No. 85.
- Holland, J.L. (1985). *The Self-Directed Search: Professional Manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Lenz, J.G., Reardon, R.C., & Sampson, J.P. (1993). Holland's theory and effective use of computer-assisted career guidance systems. *Journal of Career Development*, 19(4), 245-253.
- Marcia, J.E. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology*, 3, 551-558.
- Marcia, J.E. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology*. New York: Wiley.
- Miller, M.J., Karriker, C.S., & Springer, T.P. (1986). A comparison of two approaches to counselor-free career exploration. *Journal of Employment Counseling*, 23(4), 167-175.
- Mosca, J.B. (1989). Technology affects careers: A proposal for the year 2000. *Journal of Employment Counseling*, 26(3), 98-106.
- Muzcko, J.P., & Thompson, M.A. (1994). Career preparation and the college football player. *Academic Athletic Journal*, Spring, 18-23.
- Myers, I.B., & McCaulley, M.H. (1985). *A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Nelson, L.S., & Roberge, L.P. (1993). The relationship between psychological type and preference for career services: Implications for career development strategies. *College Student Journal*, 27(3), 312-321.
- Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development*, 15, 1-12.
- Pyle, K.R. (1985). High Tech/High Touch: A synergy applicable to career development. Special issue: Computers and career development. *Journal of Career Development*, 12(2), 145-156.
- Roselle, B.E., & Hummerl, T.J. (1988). Intellectual development and interaction effectiveness with DISCOVER. *Career Development Quarterly*, 36(3), 241-250.
- Sampson, J.P., & Johnson, C.S. (1993). *Helping you help people find their way: SIGI PLUS training resource guide*. Princeton, NJ: Educational Testing Service.
- Sampson, J.P., Peterson, G.W., Reardon, R.C. (1989). Counselor intervention strategies for computer-assisted career guidance: An information processing approach. *Journal of Career Development*, 16(2), 139-154.
- Whitfield, E.A. (1988). Responsibility for career transition preparation. Special issue: Transition to work: Beyond the successful interview. *Journal of Career Development*, 15(1), 13-19.
- Wooten, H.R., Usher, C.H., & Osborne, W.L. (1994). Developing career development profiles of student-athletes: A comparison with non-athletes. *Academic Athletic Journal*, Spring, 11-17.
- Yee, D., & Pawlovich, W. (1988). Students' perceptions of a compulsory career guidance program. *Canadian Journal of Counselling*, 22(2), 102-113.

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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 to 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

	Freshman	Year in school 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.

Reference

- Blann, W. (1985). Intercollegiate athletic competition and student's educational and career plans. *Journal of College Student Personnel*, 26, 115-118.
- Brown, C. (1993). The relationship between role commitment and career developmental tasks among college student-athletes. (Doctoral dissertation, University of Missouri, 1993). *Dissertation Abstracts International*, 55, 1429A.
- Bulling, A. (1992). The relationship of involvement in intercollegiate athletics and other extracurricular activities to personal development. (Doctoral dissertation, University of Nebraska, 1992). *Dissertation Abstracts International*, 54, 0101A.
- Chartrand, J. M., & Lent, R. W. (1987). Sports counseling: Enhancing the development of the student-athlete. *Journal of Counseling and Development*, 66, 164-167.
- Cheatham, H., Slaney, R., & Coleman, N. (1990). Institutional effects on the psychosocial development of African-American students. *Journal of Counseling Psychology*, 37, 453-458.
- Chickering, A. W. (1969). *Education and Identity*. San Francisco, CA: Jossey-Bass.
- Coleman, V., & Barker, S. (1994). Athletics and career development: A research model. In W. Kirk, & S. Kirk (Eds.), *Student athletes: Shattering the myths & sharing the realities* (pp. 81-92). Alexandria, VA: American Counseling Association.
- Etzel, E., Ferrante, A., & Pinkney, J. (Eds.). (in press). *Counseling college student-athletes: Issues and interventions* (2nd ed.). Morgantown, WV: Fitness Information Technology.
- Ferrante, A., & Etzel, E. (1991). Counseling college student-athletes: The problem, the need. In E. Etzel, A. Ferrante, & J. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions* (pp. 1-17). Morgantown, WV: Fitness Information Technology.
- Grayson, P. (1989). The college psychotherapy client. In P. Grayson & K. Cauley (Eds.), *College psychotherapy* (pp. 8-28). New York: Guilford Press.
- Greenspan, M., & Andersen, M. (1995). Providing psychological services to student-athletes: A developmental psychology model. In S. Murphy (Ed.), *Sport psychology interventions* (pp. 177-191). Champaign, IL: Human Kinetics.
- Jones, T. (1990). The effects of extracurricular involvement on the achievement of developmental tasks among college students. *Georgia Journal of College Student Affairs*, 5, 9-16.
- Jordan, J. & Denson, E. (1990). Student services for athletes: A model for enhancing the student-athlete experience. *Journal of Counseling and Development*, 69, 95-97.
- Jordan-Cox, C. A. (1987). Psychosocial development of students in traditionally black institutions. *Journal of College Student Personnel*, 28, 504-512.
- Kennedy, S. R., & Dimick, K. M. (1987). Career maturity and professional sports expectations of college football and basketball players. *Journal of College Student Personnel*, 28, 293-297.
- Lantz, C. (1995). *Validation of a conceptual model characterizing college student-athletes readiness to retire from competitive sport participation*. Unpublished doctoral dissertation, West Virginia University, Morgantown.
- Lawrence, M. J. (1985). A comparative study of student development levels of varsity athletes at the Florida State University (Doctoral dissertation, Florida State University, 1985). *Dissertation Abstracts International*, 44, A4240.
- May, K. M., & Logan, C. R. (1993). Family type and the accomplishment of developmental tasks. *Journal of College Student Development*, 34, 397-400.
- Miller, T. K., & Winston, R. B. (1990). Assessing development from a psycho-social perspective. In D. G. Creamer (Ed.), *College student development: Theory and practice for the 1990's*. (pp. 99-126). Alexandria, VA: American College Personnel Association.
- Pace, C. R. (1979). *Measuring outcomes of college: Fifty years of findings and recommendations for the future*. San Francisco: Jossey-Bass.
- Remer, R., Tongate, R. A., & Watson, J. (1978). Athletes: Counseling the overprivileged minority. *Personnel and Guidance Journal*, 56, 616-629.
- Sedlacek, W., & Adams-Gaston, J. (1992). Predicting the academic success of student-athletes using SAT and noncognitive variables. *Journal of Counseling and Development*, 70, 724-727.
- Sowa, C. J., & Gressard, C. F. (1983). Athletic participation and its relationship to student development. *Journal of College Student Development*, 24, 226-239.
- Springer, L., Terenzini, P., Pascarella, E., & Nora, A. (1995). Influences on college students' orientations toward learning for self-understanding. *Journal of College Student Development*, 36, 5-18.
- Stone, J., & Strange, C. (1989). Quality of student experiences of freshman intercollegiate athletes. *Journal of College Student Development*, 30, 148-154.
- White, K., & Strange, C. (1993). Effects of unwanted childhood sexual experiences on psychosocial development of college women. *Journal of College Student Development*, 34, 289-294.

- Winston, R. B., Miller, T. K., & Prince, J. S. (1979). *Student Developmental Task Inventory* (rev., 2nd ed.). Athens, GA: Student Developmental Associates.
- Winston, R. B., & Miller, T. K. (1987). *The Student Developmental Task and Lifestyle Inventory Manual*. Athens, GA: Student Developmental Associates.

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After the Final Snap: Cognitive Appraisal, Coping, and Life Satisfaction Among Former Collegiate Athletes

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Lazarus and Folkman's (1984) cognitive model was used to examine the effect of retirement from intercollegiate football. Former players experienced both positive and negative emotions, reported different levels of personal control, and used a variety of coping strategies that were related to life satisfaction. The appraisal process was a stronger predictor of life satisfaction, following intercollegiate football retirement, than the use of any specific coping strategy.

Athletes who compete at the intercollegiate level must dedicate enormous time and energy to their sport. Meetings, practices, weight training, competitions, and travel often can take 30 to 50 hours of an athlete's time per week (Sage, 1987). This time commitment requires athletes to adjust their daily schedules around their sport not only during the season but also in the off-season. This intense personal commitment contributes to the athlete's life being strongly intertwined with sport participation. Many athletes' personal relationships are with other athletes who have similar goals and objectives in sport (Lanning, 1982). These relationships are an important part of the athletes' social support system and can affect their sense of personal identity and social status. Continued involvement in sport also can leave athletes with the feeling that the only aspects of their lives with any structure are sport participation and sport-related activities. Although many athletes become accustomed to the demands of an athletic career and are willing to commit the time and energy to reach their personal athletic goals, many may not be prepared for the dramatic changes that occur upon retirement from sport (McInally, Cavin-Stice, & Knott, 1992).

Sport retirement requires athletes to make adjustments in their lives, including changes in their goals, personal relationships, sense of personal identity, and social status (Orlick & Werthner, 1987). Many athletes even lose their feelings of personal worth once they are unable to continue their athletic careers (Lanning, 1982). These changes, and the consequent adjustments, can be stressful for many athletes (Coakley, 1983) and can also result in changes in an individual's life satisfaction without sport (Werthner & Orlick, 1986).

Although research confirms that sport retirement can be stressful (Svoboda & Vanek, 1982), little is known about the emotional impact of the changes associated with ending a sport career. Werthner and Orlick (1982) suggested that the intensity and duration of stress associated with sport retirement will be different

for each athlete. Baillie and Danish (1992) came to a similar conclusion in their review of the sport retirement/transition literature. Baillie and Danish reviewed the sport retirement/transition literature from a lifespan development perspective, recognizing the importance of athlete identity formation in children and adolescents, the impact of continued sport participation on one's self-identity, and how these issues influence the various responses individuals may have to ending a sport career. Drawing from the limited information available, intervention models (e.g., Baillie, 1993) have been suggested to assist in sport retirement preparation and to help athletes with the transition out of sport. However, little research is available to assist in intervention development concerning sport retirement's affect on individual cognitive appraisal and coping at the end of a sport career (e.g., Svoboda & Vanek, 1982). A recent study (Sinclair & Orlick, 1993), did examine individual coping strategies of athletes following retirement from competitive sport. This study identified strategies considered helpful (e.g., "finding another focus of interest") and others considered not helpful (e.g., "drinking alcohol/drugs") immediately following retirement from international sports. Sinclair and Orlick's study also indicated that 74% of the former athletes were generally satisfied with their post-sport lives and 11% were dissatisfied with their lives without competitive sport participation. However, this investigation and other research has neglected to use a solid theory-base when studying these variables and has not examined the relationships between cognitive appraisal and coping with individuals' life satisfaction following sport retirement.

Lazarus and Folkman's (1984) process model of stress emphasizes that the responses to stress depend on the relationships among the person, the environment, and the individual's coping resources. These relationships affect perceptions of stress and whether the situation is interpreted as positive or negative. The four key components of the process model of stress are (a) primary appraisal, (b) secondary appraisal, (c) coping, and (d) reappraisal. Primary appraisals include both anticipatory and outcome perceptions. Anticipatory appraisal is made prior to events or before the completion of an event's outcome and involves whether or not the individual perceives the situation as a threat or a challenge. Primary appraisal of outcome concerns whether the outcome of an event is perceived to be harmful or beneficial. Secondary appraisal involves the individual's perception of what can be done in a situation, including feelings of personal control.

According to the Lazarus and Folkman (1984) model, each person will appraise individually the threat, challenge, harm, and benefit associated with the situation; the actions that can be taken; and their control over the situation. Individuals' primary and secondary appraisals of the situation affect how they respond, the emotions they experience, and the coping behaviors they are likely to exhibit.

Coping is defined as "constantly changing cognitive and behavioral efforts to manage specific external and or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Coping responses have been grouped into two general categories: (a) problem-focused coping (PFC) and (b) emotion-focused coping (EFC). PFC is used when the stressor can be reduced or eliminated, and is similar to problem-solving. PFC, however, is not limited to external changes or alterations in the environment. PFC strategies include

changing motivation, developing new skills, and developing a new standard of behavior. EFC refers to cognitive processes that are used to decrease the emotional distress associated with an encounter, and are used primarily when individuals feel they have little or no control over a situation. Possible EFC strategies include emphasizing the positive, denial, and selective attention toward or away from the stressor.

Reappraisal follows the initial cognitive appraisal and coping attempts, and utilizes new information and changes in person-environment relationships. In a continuing process, reappraisal results in modifications of earlier appraisals and influences future coping efforts.

Lazarus and Folkman's (1984) cognitive model of stress, appraisal, and coping provides a possible framework to better understand athletes' reactions to sport retirement and the impact on their life satisfaction after sport. The purpose of this investigation is twofold: (a) to identify the appraisal and coping responses of players who have recently retired from collegiate football and (b) to investigate how these appraisals and coping strategies are related to former players' life satisfaction. Specifically, two hypotheses were investigated to assess the relationships among primary appraisal, secondary appraisal, coping, and life satisfaction among former collegiate football players. The first hypothesis was that primary appraisal, secondary appraisal, and coping are positively correlated with life satisfaction at the time of their retirement from sport. The second hypothesis was that primary appraisal, secondary appraisal, and coping are positively correlated with life satisfaction several months following sport retirement.

Method

Participants

Ninety-two former players at 18 participating National Collegiate Athletic Association Division I-A and I-AA universities were contacted and 77 agreed to participate. Data were collected from 53 of the 77 former players who agreed to participate, although one questionnaire was unusable because of missing data. This resulted in the final sample of 52 former collegiate football players, a 69% return rate of useable questionnaires distributed. The average age of respondents was 22.9 years. Retirement from football had occurred between 2 and 24 ($M = 7.7$) months prior to data collection.

Procedure

After receiving approval by the university research review committee, athletic department staff (i.e., academic counselors, coaches, and sport psychologists) at 24 universities were sent a copy of the *Intercollegiate Football Retirement Questionnaire* (IFRQ), a booklet assembled for this study, and a formal letter requesting their assistance in collecting information from all football players who had ended their collegiate football careers less than nine months ago. A follow up phone call was then made to confirm cooperation. Eighteen of the 24 universities agreed to participate. Staff members were sent between 4-30 IFRQs to administer to former collegiate football players at their respective universities. A follow up letter and a "return rate" postcard were also sent to all cooperating staff members.

After completion, the IFRQs and the return rate postcards were returned to the investigator for analysis. IFRQs returned also included responses by former collegiate football players who had ended their collegiate football careers more than nine months ago. These data were retained in the analysis to increase the overall sample size.

Instrumentation

Intercollegiate Football Retirement Questionnaire (IFRQ). This self-report booklet was developed for the present investigation and contained an informed consent page and three assessment sections. Section one assessed demographic information, personal control ratings, and life satisfaction ratings; section two included the General Emotion Scale (Folkman & Lazarus, 1985); and section three consisted of the COPE inventory (Carver, Scheier, & Weintraub, 1989).

Demographic information, personal control ratings, and life satisfaction ratings. The first section assessed former players' demographic information and feelings of personal control (i.e., secondary appraisal) and overall life satisfaction ratings immediately following retirement from collegiate football and at the time of questionnaire completion. General questions concerning age and months since last collegiate football game used a completion format. The life satisfaction and feelings of personal control questions, from Werthner's (1985) *Elite Athlete Retirement Interview Schedule*, used a Likert-style format, ranging from 1 (*the pits/not at all in control*) to 10 (*perfect/totally in control*).

The numerical responses to the feelings of personal control at time of retirement comprised the Retirement Personal Control variable, the numerical responses to the feelings of personal control at the time of questionnaire completion constituted the Present Personal Control variable. Retirement Personal Control and Present Personal Control represent secondary appraisals at two different times in the retirement transition. The numerical responses to the life satisfaction items at time of retirement comprised the Retirement Life Satisfaction variable, the numerical responses to the life satisfaction items at the time of questionnaire completion constituted the Present Life Satisfaction variable.

General Emotion Scale (GES). The GES (Folkman & Lazarus, 1985) was designed to assess primary appraisal by measuring the emotions of harm, benefit, challenge, and threat experienced in various encounters. The items for harm are *angry, disappointed, and guilty*. Items for benefit are *pleased, happy, and relieved*. Items for challenge are *confident, hopeful, and eager*. Items for threat are *worried, fearful, and anxious*. The GES was adapted to assess these emotions, specifically with regard to athletes' experiences since retiring from collegiate football. Participants responded to the 15 items on 7-point Likert scales ranging from 1 (*not at all*) to 7 (*a great deal*). The reported alpha reliability coefficients for the 5-point version of the GES are .80 for threat, .59 for challenge, .78 for benefit, and .84 for harm (Folkman & Lazarus, 1985, p. 154). The Positive Emotion variable was indicated by the combined score of the seven challenge and benefit items. The Negative Emotion variable was indicated by the combined score of the eight harm and threat items. Positive Emotion and Negative Emotion represent primary appraisals throughout the retirement transition.

COPE. The 60-item COPE (Carver et al., 1989; Carver & Scheier, 1994) was used to assess 15 possible strategies that individuals may use to cope with various situations they encounter in their lives (e.g., sport retirement). Problem-focused coping was indicated by four variables: (a) active planning, (b) suppression of competing activities, (c) restraint coping, and (d) seeking of social support. Emotion-focused coping was indicated by five variables: (a) positive reinterpretation, (b) acceptance, (c) denial, (d) use of religion, and (e) humor. Less-effective coping was indicated by four variables: (a) focus on and venting emotions, (b) behavioral disengagement, (c) mental disengagement, and (d) alcohol/drug use. Participants responded to items on four-point Likert scales from 1 (*didn't do at all*) to 4 (*did a lot*). The alpha reliability coefficients for the COPE scales ranged from .45 for mental disengagement to .92 for turning to religion. However, mental disengagement was the only scale to drop below .62. Test-retest reliability estimates after two months ranged from .46 for suppression of competing activities to .86 for turning to religion. The means for the 15 coping strategies ranged from 12.58 for planning to 5.52 for alcohol and drug use (Carver et al.). The average score of the items in the three coping categories (i.e., problem-focused, emotion-focused, and less-effective) represent coping strategies used throughout the retirement transition.

Results

In order to assess the relationship between appraisal and coping and life satisfaction, two separate simultaneous multiple regression analyses were used. These analyses assessed which variables among primary appraisal, secondary appraisal, and the three coping strategies predict retirement life satisfaction and present life satisfaction (See Table 1).

TABLE 1
Intercorrelations Among the Nine Variables with Means and Standard Deviations

Variables	1	2	3	4	5	6	7	8	9	M	SD
1. PEMOT	—	-.13	.21	-.03	-.03	.08	-.11	.35*	.00	4.5	1.0
2. NEMOT		—	-.02	-.26	.48*	.13	.39*	-.28*	-.40*	3.7	1.1
3. CONTA			—	.37*	.03	.20	-.10	.64*	.11	7.7	1.9
4. CONTP				—	-.04	.08	.05	.34*	.20	8.6	1.4
5. PCOPE					—	.58*	.52*	-.02	.07	8.7	2.1
6. ECOPE						—	.28*	.18	.16	9.5	1.7
7. LCOPE							—	-.08	-.04	7.2	2.0
8. LIFE A								—	.35*	6.8	2.3
9. LIFE P									—	7.1	2.2

Note: PEMOT = positive emotions, NEMOT = negative emotions, CONTA = control after retirement, CONTP = control at present, PCOPE = problem-focused coping, ECOPE = emotion-focused coping, and LCOPE = less-effective coping, LIFE A = life satisfaction after retirement, LIFE P = life satisfaction at present.

* = $p < .05$

Life Satisfaction Hypotheses

The first multiple regression analysis entered three of the appraisal measures (i.e., Positive Emotion, Negative Emotion, and Retirement Personal Control) and the three coping strategies simultaneously as predictors of life satisfaction immediately after football retirement. With an alpha level of .05, the obtained multiple regression coefficient was .80 and was statistically significant, $F(6,36) = 10.45$, $p < .05$. This multiple R^2 is considered a large effect size by Cohen's (1977) criteria. The multiple R^2 indicated that 64% of the former football players' life satisfaction ratings at the time of retirement is related to their appraisals and coping with retirement from collegiate football.

Examination of the standardized beta weights indicates that only negative emotions and feelings of personal control were statistically significant in predicting life satisfaction scores immediately after retirement, ($B_s = -.26$ and $.69$, $p < .05$, for negative emotions and feelings of personal control, respectively). These regression weights suggest that former football players with high reports of life satisfaction after football experienced fewer negative emotions and felt greater control over their personal lives than former players who reported lower life satisfaction scores immediately after ending their collegiate football careers.

The second multiple regression analysis entered the same two primary appraisal measures (i.e., Positive Emotion and Negative Emotion) and the current secondary appraisal measure (i.e., Present Personal Control) and the three coping strategies simultaneously as predictors of life satisfaction at the time of questionnaire completion. The obtained multiple regression coefficient was .42, which was not statistically significant at the .05 level, $F(6,35) = 1.26$, $p = .06$. However, this multiple R^2 , .42, is considered a medium effect size (Cohen, 1977). The multiple R^2 indicates that 18% of the former players' life satisfaction ratings at the time of questionnaire completion is related to their appraisals and coping with retirement from collegiate football. Specifically, Negative Emotions was the variable accounting for the highest variance in the predicted life satisfaction scores at the time of questionnaire completion, ($B = -.41$ for Negative Emotions). These statistics suggests that former football players with high reports of life satisfaction after football experienced fewer negative emotions than former players who reported lower life satisfaction scores several months ($M = 7.7$) after ending their collegiate football careers.

Discussion

This investigation was designed to assess the appraisal and coping responses of players who had recently retired from collegiate football and the relationship between these variables and life satisfaction during the transition from collegiate football. The appraisal process was a stronger predictor of life satisfaction than the use of any specific coping strategy. Primary appraisal addresses whether the outcome of an event is perceived to be harmful or beneficial (Lazarus & Folkman, 1984). The negative appraisals in this study were assessed by identifying the emotions experienced after completing their college football experience. Negative appraisals were assessed by the feelings of anger, disappointment, guilt, worry,

fear, and anxiety. Experiencing few negative emotions was the best predictor of life satisfaction ratings several months after ending collegiate football careers. Experiencing few negative emotions and having high feelings of personal control were the best predictors of life satisfaction ratings immediately after ending collegiate football careers.

Secondary appraisal involves the individual's perception of what can be done in a situation, including feelings of control and perceived resources available (Lazarus & Folkman, 1984). Terminating a collegiate sport career can be viewed as a negative experience without much control over whether or not the termination occurs (Werthner & Orlick, 1986). In sport termination situations it may be important to be able to feel fewer negative emotions and more control in order to be satisfied with life immediately following termination. This may especially be the case given that college athletes have limited control while participating in the sport and limited control over when their college sport career is terminated (Werthner & Orlick, 1986).

In a broader context, Lazarus and Folkman's (1984) model suggests that the appraisal process is affected by the coping and reappraisal an individual goes through when confronted with a situation. The current study did not collect data that provided specific information on how the coping process impacted reappraisal of the sport retirement process. Therefore, it is difficult to speculate on the appraisals in this study, other than it appears that the coping strategies used impacted the appraisal process and allowed individuals to feel satisfied with their lives.

The results in the current study are similar to Curtis and Ennis' (1988) findings for former elite hockey players. Former hockey players in their study were more satisfied with their lives than the general sample, but 75% of the hockey players expressed at least some negative feelings after retiring from their sport. Research has also indicated that sport retirement requires athletes to make adjustments in their goals, personal relationships, sense of personal identity, and social status (Orlick & Werthner, 1987). In selecting Lazarus and Folkman's (1984) appraisal and coping model to study sport retirement, it was assumed that the transition from collegiate football would cause former players to experience various emotions, make countless appraisals, and result in them using numerous coping strategies in order to deal with their emotional responses to sport retirement. The results of these analyses support those assumptions and provide initial information on some of the possible relationships among appraisal, coping, and life satisfaction that occur in retirement from football. It also appears that the former players in this study were at least attempting to cope with their sport retirement through their reported use of various coping strategies. However, it is unclear if they had effectively coped with their retirement from collegiate football, although, slight increases reported in feelings of personal control and life satisfaction several months following sport retirement suggest they were making successful adjustments. As in previous research (Svoboda & Vanek, 1982), some former athletes may have coped immediately with sport retirement, whereas, others may take several years to adjust to the end of their athletic careers.

Conclusions

This study was able to provide support for the applicability of Lazarus and Folkman's (1984) model of appraisal and coping to the sport retirement process. Former players experienced both positive and negative emotions, and reported different levels of personal control, while using a variety of coping strategies during their retirement from playing collegiate football. This study also assessed appraisal and coping strategies associated with life satisfaction after retirement from collegiate football. The various coping strategies reported by individuals suggest that unique evaluations of sport retirement may require different types of actions or responses in order to effectively deal with the emotions experienced during this transition. The complex relationships involved in the appraisal and coping process may, in turn, relate to higher life satisfaction ratings for individuals.

Implications for Student-Athlete Support Services

Those involved in the delivery of support services are devoting increased attention to issues of life satisfaction (Dencker, 1993) and the financial constraints influencing service delivery (Dworkin & Lyddon, 1991). Changes such as these make it important to use all available information to ensure that the most appropriate and efficient services are provided to current and former student-athletes. Frankenhaeuser (1977) has suggested that the use of individuals' subjective evaluations of their overall life satisfaction or quality of life is necessary in service and treatment decision-making processes. Results from this investigation provide support service personnel with a clearer understanding of the dynamic relationships that may exist between appraisal and coping variables and life satisfaction following sport retirement. For example, the appraisal process appears to be a stronger predictor of life satisfaction than the use of any specific coping strategy used in dealing with sport retirement. Understanding these complex relationships, with attention to the student-athletes' appraisal of sport retirement, should allow support service personnel to better meet the needs of their student-athletes in a time of limited resources.

From a psychoeducational perspective, the results of this study should be helpful in the formation of programs targeted at developing effective appraisal and coping skills for individuals. The findings suggest it is not necessarily the type of strategy one uses in coping with sport retirement that matters, as long as the coping is helpful in decreasing the negative emotions associated with the appraisal of ending one's sport career. Prevention programs that prepare individuals to address changes they will experience once they end their collegiate sport career may be helpful in the process of coping with the negative emotions (e.g., sadness, anger, and guilt) associated with sport retirement, increase the positive emotions (e.g., confidence, hope, and happiness), and increase an individual's belief in their coping potential (i.e., secondary appraisal) without involvement in competitive sports. These programs can accomplish this by providing information about the coping process and identifying how individuals' appraisals and coping strategies can negatively impact their life satisfaction. Once individuals gain this knowledge about themselves, they can work on transferring the skills

they have developed through participating in sports, while continuing to acquire new appraisal and coping skills that will hopefully lead to an increase in ratings of life satisfaction.

Future Directions

The results of this investigation are limited by the one time retrospective data collection and a nonrandom sample of former collegiate football players. In order to get a clearer representation of the possible cognitive appraisal and coping that occur during the sport retirement process, future investigations need to take multiple intraindividual measurements of appraisal and coping variables at various points during the retirement transition such as mid-season, immediately following the last game, 3-6 months later, and 9-12 months after ending their sport career (Folkman & Lazarus, 1985, 1988) in order to address this complex relationship. Instruments also need to be used to measure what specific aspects of sport retirement are considered positive and negative (e.g., Williams-Rice & Burton, 1990). As suggested by Lazarus and Folkman (1984), a major life event such as sport retirement cannot be considered stressful by itself without knowing how each individual appraises their specific retirement situation and what impact this process has on life satisfaction. Despite its limitations, results from this study suggest that Lazarus and Folkman's cognitive model of appraisal and coping is helpful in better understanding the variables that influence individuals' life satisfaction in the context of complex processes such as sport retirement.

References

- Baillie, P. H. F. (1993). Understanding retirement from sport: Therapeutic ideas for helping athletes in transition. *The Counseling Psychologist*, 21, 399-410.
- Baillie, P. H. F., & Danish, S. J. (1992). Understanding the career transition of athletes. *The Sport Psychologist*, 6, 77-98.
- Carver, C. D., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267-283.
- Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology*, 66, 184-195.
- Coakley, J. J. (1983). Leaving competitive sport: Retirement or rebirth? *Quest*, 35, 1-11.
- Cohen J. (1977). *Statistical power analyses for the behavioral sciences*. New York: Academic.
- Curtis, J., & Ennis, R. (1988). Negative consequences of leaving competitive sport? Comparative findings for former elite-level hockey players. *Sociology of Sport Journal*, 5, 87-106.
- Dencker, S. J. (1992). The value of quality of life ratings in psychiatry. *Nordisk Psykiatrisk Tidsskrift*, 46, 91-93.
- Dworkin, D. S., & Lyddon, W. J. (1991). Managing demands on counseling services: The Colorado State University experience. *Journal of Counseling and Development*, 69, 402-407.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.
- Folkman, S., & Lazarus, R. S. (1988). Coping as a mediator of emotion. *Journal of Personality and Social Psychology*, 54, 466-475.
- Frankenhaeuser, M. (1977). Quality of life: Criteria for behavioral adjustment. *International Journal of Psychology*, 12, 99-110.
- Lanning, W. (1982). The privileged few: Special counseling needs of athletes. *Journal of Sport Psychology*, 4, 19-23.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- McInally, L., Cavin-Stice, J., & Knoth, R. L. (1992). *Adjustment following retirement from professional football*. Paper presented at the annual meeting of the American Psychological Association, Washington D. C.
- Orlick, T., & Werthner, P. (1987). *Athletes in transition*. Toronto: Olympic Athlete Career Centre.
- Sage, G. (1987). Blaming the victim: NCAA responses to calls for reform in major college sports. *Arena Review*, 11, 1-11.
- Sinclair, D. A., & Orlick, T. (1993). Positive transitions from high-performance sport. *The Sport Psychologist*, 7, 138-150.
- Svoboda, B., & Vanek, M. (1982). Retirement from high level competition. *Mental training for coaches and athletes* (pp. 166-175). Ottawa: Coaching Association of Canada.
- Werthner, P. (1985). *Retirement experiences of elite Canadian athletes*. Unpublished master's thesis, University of Ottawa, Ottawa, Canada.
- Werthner, P., & Orlick, T. (1982). Transition from sport: Coping with the end. *Mental training for coaches and athletes* (pp. 188-192). Ottawa: Coaching Association of Canada.
- Werthner, P., & Orlick, T. (1986). Retirement experiences of successful Olympic athletes. *International Journal of Sport Psychology*, 17, 337-363.
- Williams-Rice, B. T., & Burton, D. (1990). *Collegiate Football Retirement Appraisal Inventory*. Unpublished Inventory, University of Idaho, Moscow, Idaho.

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- Andersen, M. B., & Van Raalte, J. L. (1994). Supervising academic athletic counseling. *Spring*, 1-10.
- Arnett, L. A., & McElroy, L. A. (1987). Can non-traditional predictor variables (academic comfort, study habits/attitudes, and perceptual modality preference) enhance the discrimination of academically successful and non-successful athletes: A research proposal. *Fall*, 25-33.
- Bartolini, B. J. (1994). Reality therapy in athletic counseling: Applications for college student-athletes. *Fall*, 1-10.
- Beller, J. M., & Stoll, S. K. (1992). A moral reasoning intervention program for student-athletes. *Spring*, 43-57.
- Brewer, B. W., & Petrie, T. A. (1995). A comparison between injured and uninjured football players on selected psychosocial variables. *Spring*, 11-18.
- Bruno, J. E. (1989). Developing a professional standard of care for academic advisors of student athletes: Use of information based formative evaluation in academic support. *Fall*, 17-36.
- Bruno, J. E., Holland, J. R., & Ward, J. W. (1987). Going beyond NCAA bylaw 5-1-(j): Developing learning prescriptions for student-athletes. *Spring*, 1-13.
- Bunnage, J. C., Rice, R. L. (1991). Transfer student-athletes: Prominent but vulnerable. *Spring*, 16-22.
- Camp, H. J., & Epps, J. (1986). Paths between the locker room and the library: An analysis of role conflict among student athletes. *Spring*, 10-18.
- Coleman, V. D., & Barker, S. A. (1991a). A model of career development for student-athletes. *Spring*, 33-40.
- Coleman, V. D., & Barker, S. A. (1991b). Academic counseling for student-athletes: A model. *Fall*, 13-19.
- Coleman, V. D., & Barker, S. A. (1992). Counseling multicultural student-athletes: An examination of barriers. *Spring*, 26-33.
- Coleman, V. D., & Barker, S. A. (1993). Career issues for the female student-athlete. *Fall*, 20-26.
- Cone, A. E., & Rosenbaum, J. L. (1990). Predicting academic success among student-athletes. *Spring*, 1-8.
- Denson, E. L. (1992). Integrating support services for student-athletes: Possible pathways. *Fall*, 16-23.
- Denson, E. L., Jordan, J. M., Green, K. G., & Harris, J. A. (1993). Occupational interest patterns and personality styles of freshman student-athletes. *Spring*, 13-26.
- Eitzel, E. F., Barrow, J. C., & Pinkney, J. W. (1994). Career counseling and student-athletes: A needs assessment. *Fall*, 37-46.
- Eitzel, E. F., Weaver, K. L., & Ostrow, A. C. (1995). Job responsibilities and backgrounds of NCAA Division I athletic advisors: A replication. *Spring*, 1-10.
- Ferris, E. (1987). Survey of five athletic academic support facilities. *Fall*, 15-23.
- Fletcher, H. J., & Mand, B. (1988). Grade improvement by academically endangered student-athletes following brief study skills training. *Spring*, 17-24.
- Foster, T. R. (1986). From theory to practice in programming for student-athletes. *Spring*, 1-9.
- Funk, G. D., & Haseltine, B. (1987). The writing process: A means to improving the writing skills of the student-athlete. *Spring*, 35-39.
- Gerdy, J. R. (1994). Student-athlete development: An institutional responsibility. *Spring*, 34-39.
- Glenn, S. S., Bruce, G., Ellis, J., & Rollins, L. (1986). Contingency management in an athletic study hall. *Spring*, 19-26.
- Goldman, M. V., & Robinson, D. C. (1989). Role conflicts experienced by male college varsity football players. *Spring*, 6-20.
- Good, A. J., Brewer, B. W., Petitpas, A. J., Van Raalte, M. T. (1993). Identity foreclosure, athletic identity, and college sport participation. *Spring*, 1-12.
- Goodloe, N. R. (1989). Wellness programming in collegiate athletics: A movement toward balance. *Spring*, 21-26.
- Green, K. E., & Denson, E. L. (1993). Building rapport with student-athletes: A survey of counselor strategies. *Fall*, 38-53.

- Gruber, C. A. (1993). Advising female and male student-athletes: How gender differences affect the advising process. *Fall*, 10-19.
- Gurney, G. S., & Johnston, S. P. (1986). Advising the student-athlete. *Spring*, 35-38.
- Hale, B. D., Waalkes, D. M., Kenepp, D. L., Lynch, J. M., Bennell, D. L., & Wang, M. (1994). A comprehensive education and prevention program for student-athletes: A life skills/experiential learning model. *Fall*, 47-62.
- Hattig, S. (1991). Assisting freshman student-athletes with educational planning and career development. *Spring*, 23-32.
- Hill, T. L. (1994). Student-athlete development: Balance is the key. *Spring*, 40-42.
- Hunt, B. P., Pujol, T. J., & Muczko, J. P. (1992). HIV/AIDS knowledge sources of college student-athletes in a southern state. *Fall*, 1-15.
- Jesudason, M. (1990). Middle school "at-risk" student-athletes and Proposition 42. *Spring*, 9-28.
- Jesudason, M. (1993). Academic libraries and athletic departments: A nurturing collaboration. *Fall*, 1-9.
- Judge, L. W. (1992). The academic success rate of Proposition 48 student-athletes: A study of student-athletes at a midwestern university. *Fall*, 30-46.
- Judge, W. J. (1986). NCAA drug testing: Finding a constitutional balance. *Spring*, 39-48.
- Kellenberger, R. C. (1986a). Proposition 48—college admissions tests: Friend or foe? *Fall*, 15-23.
- Kellenberger, R. C. (1986b). Strong back/strong mind: Mutually exclusive? *Fall*, 35-42.
- Lyons, D. M. (1989). Proposition 48 and a Division II institution. *Spring*, 27-30.
- McMillian, M. (1987). The retention of collegiate athletes as minority students and future teachers: A case study. *Spring*, 15-22.
- Mand, B., & Fletcher, H. J. (1986). The NAAAA: Ten years old and changing. *Fall*, 1-14.
- Mayo, A. M. (1986a). The role of a code of ethics in athletic academic counseling. *Spring*, 27-30.
- Mayo, A. M. (1986b). Athletes and academic performance: A study of athletes at an NCAA Division I institution. *Fall*, 25-33.
- Meyer, B. B. (1993). Support services and the Division I student-athlete: Experiences, needs, and implications. *Spring*, 40-52.
- Muczko, J. P., & Thompson, M. A. (1994). Career preparation and the college football player. *Spring*, 18-23.
- Oja, D. E. (1987). A survey of moral concerns and job-related stress among academic advisors of college athletes. *Spring*, 41-54.
- Parmer, T., & Coleman, V. D. (1994). The athletic dream: The quest for work equality in an unequal society. *Fall*, 24-36.
- Petitpas, A., & Schwartz, H. (1989). Assisting student-athletes in understanding and identifying transferable skills. *Fall*, 37-42.
- Petitpas, A. J., & Van Raalte, J. L. (1992). Planning alcohol education programs for intercollegiate student-athletes. *Spring*, 12-25.
- Reed, J. L. (1992). Athletic scholarships as contracts: Legal ramifications for the university and obligations of the student-athlete. *Spring*, 1-11.
- Richardson, P., Winklemann, A., & Nelson, C. (1990). Peak performance for student-athletes. *Spring*, 43-49.
- Roberts-Wilbur, J. R., Wilbur, M., & Morris, J. R. (1987). The freshman athlete's transition: Athletic and academic stressors. *Spring*, 23-33.
- Roberts-Wilbur, J. R., Wilbur, M., & Morris, J. R. (1989). Female athletes and the athletic system. *Fall*, 43-54.
- Robinson, D. C., & Goldman, M. (1988). Assessing the academic performance of college football players through the use of multiple measures: A six-year follow-up study. *Spring*, 35-40.
- Sailes, G. A. (1993). An investigation of academic accountability among student-athletes. *Spring*, 27-39.
- Sanders, E. J. (1992). Implementing a career development program for student-athletes. *Fall*, 24-29.
- Schliesman, E. S., & Dunn, J. S. (1994). Keeping a watchful eye on continuing eligibility. *Spring*, 24-33.
- Schubert, G. W., & Gillett, J. W. (1986). The student-athlete's predicted monetary value to an institution. *Fall*, 43-46.

- Schubert, G. W., & Bredahl, J. A. (1987). The NAAAA and the NCAA: Methods of placing legislation on the agenda of NCAA conventions. *Fall*, 9-13.
- Schubert-Madsen, C. L., & Schubert, G. W. (1989). The student-athlete: Procedural due process and property right. *Spring*, 31-38.
- Sellers, R. M., Kuperminc, G. P., & Waddell, A. S. (1991). Life experiences of black student-athletes in revenue-producing sports: A descriptive empirical analysis. *Fall*, 20-38.
- Serrano, A. (1987). Athletic academic counseling: A survey of members of the National Association of Academic Advisors for Athletics. *Fall*, 35-47.
- Serrano, A. (1988). The genesis of a new profession: Athletic academic counseling. *Spring*, 41-45.
- Sinatra-Ostlund, C. (1988). The use of a GPA prediction formula to better prepare the freshman student-athlete for college academic success: One school's approach. *Spring*, 11-16.
- Snyder, P. L. (1993). Gender differences in university student-athletes' expressed levels of academic and athletic motivation. *Fall*, 27-37.
- Stier, W. F. (1992). The TRIAD assisting, advising, and assessment model: One institution's attempt to support the student-athlete. *Spring*, 34-42.
- Stone, J. A. (1987). Applying student involvement theory to intercollegiate athletics: Astin's model and its relationship to developmental issues. *Fall*, 1-8.
- Strean, W. B. (1994). Perceptions of the intercollegiate athletic experience: Perspectives from NCAA Division I and Division III. *Fall*, 11-23.
- Swann, P. R. (1989). An analysis of support services for student athletes attending Division I institutions of higher education: A summary. *Spring*, 39-41.
- Terry, L. R., DeGroot, W., O'Brien, D., Campbell, C., & Hollstein, U. (1991). A comparison of two intervention strategies on the academic performance of student-athletes. *Spring*, 1-15.
- Toye, P. J., & Lanning, W. (1989). The relationship between dependency and sport participation, category of sport, and gender in college athletics. *Fall*, 6-16.
- Whitner, P. A. (1990). A model for measuring the academic achievement of student athletes. *Spring*, 29-42.
- Whitner, P. A., & Sanz, D. L. (1988a). Evaluation of a study skills program for student-athletes. *Spring*, 1-10.
- Whitner, P. A., & Sanz, D. L. (1988b). Student-athletes as peer counselors. *Spring*, 25-34.
- Wilbur, J. R., & Wilbur, M. (1986). The academic game. *Spring*, 31-34.
- Willoughby, L. M., Willoughby, D. S., Moses, P. A. (1991). Mentors for beginning college student-athletes: A possible aid for academic success. *Fall*, 1-12.
- Wooten, H. R., & Rhyne-Winkler, M. C. (1995). The student-athlete life/career portfolio: A multifaceted approach to life and career development. *Spring*, 19-25.
- Wooten, H. R., Usher, C. H., Osborne, W. L. (1994). Developing career development profiles of student-athletes: A comparison with non-athletes. *Spring*, 11-17.
- Zangari, R. E. (1995). A comparison of two initial eligibility rules: Propositions 48 and 16. *Spring*, 26-38.