THE EFFECTIVENESS OF A CAREER DEVELOPMENT INTERVENTION PROGRAM DESIGNED TO ASSIST STUDENT ATHLETES THROUGH THE SPORT RETIREMENT TRANSITION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

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* * * * *

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ABSTRACT

For the vast majority of collegiate student athletes, sport retirement is an inevitable transition that they will face when finished with college. This study examined the impact a career development course had on fourth and fifth year student athletes who were faced with the sport retirement transition. Twenty-five student athletes who enrolled in the course over two quarters were compared to forty-two student athletes who participated as control group subjects not enrolled in the course. All subjects were tested on career maturity (Career Maturity Inventory), career self-efficacy (Career Decision Making Self-Efficacy Scale), and their readiness to retire (Life Transitions Inventory for Athletes).

Students who enrolled in the career development course were trained in the areas of (1) identity exploration, particularly how to identify transferable skills from sports, (2) goal setting, and how to set realistic, achievable non-sport goals, (3) decision making, especially regarding career options and possibly graduate school, (4) communication skills, how to effectively network and interview with employers, (5) career training skills, such as resume writing and conducting an informational interview, and (6) future planning. The course was designed to give support to student athletes coping with this period in their life and to train them in the skills necessary for life after sports. Results of the study found that although participants in the course consistently scored in the expected direction on all
three tests, these results were rarely statistically significant, owing in part to small sample size. Effect sizes, on the other hand, consistently were yielded moderate to high.

A description of the career program (Positive Transitions), demographic data of the subjects who participated in the study, the research design, and results of the study are provided. Implications for the development of career transition programs are discussed, along with suggestions for future research.
Dedicated to Luke, Marie, Andy, and Jane
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CHAPTER 1

INTRODUCTION

A transition can be said to occur, "if an event or non-event results in a change in assumptions about oneself and the world and thus requires a corresponding change in one's behavior and relationships" (Schlossberg, 1981, p. 5). One particular type of transition is the inevitable retirement from elite sport participation. For some athletes, the sport retirement transition is quite effortless and pain-free, and is seen more like "a chapter in the book of life" (Thomas & Ermler, 1988, p. 138). However, recent studies have suggested that for a large number of athletes the retirement experience is an incredibly painful process filled with grief, self-doubt, and a sense of loss (Blinde & Stratta, 1993; Gordon, 1988; Murphy, Petitpas, & Brewer, 1996; Ogilvie & Howe, 1986; Parker, 1994).

Transition out of a career in sports is a difficult and disruptive process for many athletes (Baille & Danish, 1992; Mihovilovic, 1968). For most Americans, vocational retirement normally occurs somewhere after 60 years of age, but increasing attention is being paid to the issues surrounding a special type of retirement that occurs much earlier, that of athletes who are concluding their active participation in sports. Career transition
for elite athletes may be an especially difficult and disruptive process due to the abrupt and unanticipated change in routine, loss of social status, and limited work experience outside of sport.

Although only about 1% of all college athletes will ever play at any professional sport level (Figler & Figler, 1984), a far greater number of student athletes dream, and some even expect, to play at the professional level. Unfortunately, this transition of exiting from sport participation has been empirically studied only in recent years, even though the vast majority of student athletes will never play at the elite level after college.

Baille and Danish (1992) contend that athletic retirement has been long overlooked as an area for research for three reasons. First, career transition is an area that has been typically associated with older adults. Second, the small numbers of individuals in elite or professional sports have led some to conclude such research is not worth the effort. Third, a suitable model to be used with athletic retirement is not available. Ogilvie and Taylor (1993) attempted to explain this lack of research dilemma by offering two additional opinions: (a) athletes at almost every level were at one time more fully integrated into the basic fabric of society than they are now. Today elite college and professional athletes are easily recognized with the media attention that permeates competitive athletics worldwide and (b) million dollar salaries and endorsement contracts for professional athletes further separate elite athletes from the rest of society. However, researchers have recently begun to investigate the effects of sport retirement on college student athletes, recognizing that this unique population is mainly comprised of individuals
who have typically devoted many years to their sport and that disengaging from
competitive sport participation potentially can be a traumatic experience.

At the typical college or university, several hundred students participate in
intercollegiate athletics. Along with the decision to play college athletics comes the
enormous commitment of time and energy devoted to training and playing in order to keep
stay on the team. In addition, Rhatigan (1984) has identified several other noteworthy,
but often overlooked issues unique to student athletes:

1. Student athletes are often subject to the rigors of extensive travel. Sleeping in a
strange bed and eating at unusual hours can take a toll, as do typical travel hassles (e.g.,
waiting in airports and coping with misplaced luggage.)

2. Student athletes sometimes have to miss classes because of games and these
absences can disrupt the flow of the class and the understanding of materials. Copying
other students’ notes is almost never as effective as having been in class and participating
in the lecture firsthand.

3. Student athletes often have to arrange to take missed quizzes and exams. They
also have to arrange to get the notes they missed not being in class and may not be able to
attend many of the review sessions other students have because of their unique schedule.

4. If a student is receiving federally supported financial aid, he or she needs to
complete two-thirds of the hours in which they are enrolled in order to remain eligible.
The student athlete enjoys no such luxury because no student carrying less than 12 hours
can participate in collegiate competition.
5. There is often an energy drain on student athletes due to emotional pressures caused by the sport that is not experienced by the typical student. Many collegiate sporting events are viewed by large crowds of fans who often expect the student athletes to perform at a professional level. There may also be negative press by the media.

6. Most students enjoy an extended holiday season and time off from school, which is rarely the case for the student athlete. Even when the season is over, student athletes must still train and diet to maintain competitive form.

Although some argue that participating in sports builds character, studies have shown that student athletes lag behind their non-athletic counterparts in terms of psychosocial development and career planning (Blann, 1985; Kennedy & Dimick, 1987; Sowa & Gressard, 1983). Retiring from sport involves giving up a role in which the athlete has invested a great amount of time, money, and energy. The element of psychological addiction may also be present, particularly for athletes who develop a dependency on public adulation, media attention, and teammate support (Ogilvie & Taylor, 1993). For many athletes, having to give up the athletic lifestyle (especially under involuntary conditions) may be difficult to cope with unless other career and lifestyle options have been explored.

One explanation for the reduced level of career maturity in student athletes may be found by examining developmental theory. During adolescence, individuals are faced with the task of establishing their personal identity (Chickering, 1969; Erikson, 1959). The identity development formation necessitates an active exploration of roles and behaviors, followed by a commitment to the occupational and ideological options that are most
consistent with an individual's values, needs, interests, and skills (Marcia, Waterman, Matteson, Archer, & Orlofsky; 1993). Danish (1983) argued that many athletes engage in selective optimization, in which they concentrate on a sport to the exclusion of other activities. This exclusive dedication to excel in sport may restrict student athletes opportunities to engage in the exploratory behavior (Chartrand & Lent, 1987; Pearson & Pettipas, 1990), that is critical for subsequent personal and career identity development (Super, 1957).

Another construct that has been linked to athletic performance success and may play a significant role in the sport retirement transition is the level of self-efficacy an athlete has upon leaving competitive sport and pursuing other career choices (Feltz & Doyle, 1981; Weinberg & Jackson, 1990). Self-efficacy is defined as one's beliefs about his or her capabilities to exercise control over events that affect their lives (Bandura, 1977). Perceived self-efficacy affects people's choice of activities and behavioral settings, how much effort they expend, and how long they will persist in the face of obstacles and aversive experiences. The stronger the perceived self-efficacy, the more active the coping efforts (Bandura, 1977). It may be speculated that the more confidence an athlete has toward exiting sports and pursuing other non-sport careers, the more likely he or she will experience a positive transition out of sports.

An athlete may retire from sport at any time for a variety of reasons. The most often cited reasons include chronological age, injury, deselection, financial concerns, philosophical problems with coaches and/or the sport organization, and free choice. According to Schlossberg (1984), adaptation to any transition depends on three
interacting factors: (a) the characteristics of the transition, (b) the individual, and (c) the environment. The first factor includes the trigger, timing, source, and duration of the transition. For most athletes, making a smooth transition into athletic retirement is a challenge because predicting when this period will occur is almost impossible.

Several developmental models have been introduced to assist student athletes in the sport retirement process. Two models, Schlossberg's (1981) "Adaptation to Transitions" and Danish, Petitpas, and Hale's (1993) "Life Development Interventions" (LDI) model appear to have particular relevance for understanding student athletes in transition. In both models, transitions are viewed as multidimensional events with many psychological, biological, and social components. Transitions are seen as processes, not discrete activities. Both models acknowledge that transitions have their own characteristics (e.g., duration, timing) and individual reactions to a transition may vary greatly depending on one's past experiences and current support system. The most obvious difference between the two models is the intervention framework that has been introduced since the conceptualization of the LDI.

Bartolini (1994) has argued that reality therapy may be the most effective treatment modality in assisting student athletes with various issues, particularly with academic performance and career development. Reality theory posits that the problems people encounter occur because they are unable to fulfill their essential needs in a responsible way, with responsibility defined as, "the ability to fulfill one's basic needs, and to do so in a way that does not deprive others of their ability to satisfy their own needs" (Bartolini, 1994, p. 3). Reality therapy stresses the importance of assuming responsibility.
Student athletes are therefore held accountable for their actions, particularly with the understanding that most athletes do not play at the professional level. The athletes are encouraged to plan for their future more realistically.

Purpose of the Study

The purpose of this study is to determine the relationship between participation in a career assistance intervention program based on reality therapy (Bartolini, 1994) and student athletes’ career maturity, readiness to retire, and career decision making self-efficacy. The research to date has indicated that retirement from elite sport participation can be very difficult for some athletes, and studies have identified factors that mediate the nature of the transition. While there is still debate over which theoretical model is most suitable to use with athletes facing retirement, there is much that can be done to assist student athletes move on in life after the games are over. A specific intervention program will be introduced (i.e., Positive Transitions, Stankovich & Meeker, 1996) that will attempt to assist student athletes with the life skills necessary to form a new, nonathletic identity and develop the skills needed to find a career that most likely will not involve athletics. From these findings future researchers and practitioners will be able to build new theoretical retirement models that are sport specific, focusing on the variables identified to be most influential toward a positive adjustment out of sport. In addition, coaches, instructors, and parents will benefit by having intervention programs available that will assist student athletes with their inevitable athletic retirement from elite sport participation.
Research Questions

1. What are the demographic characteristics of the student athletes enrolled in a career assistance course at a large midwestern university (gender, race, grade point average, scholarship status, and type of sport played)?

2. Does career maturity (as measured by the Career Maturity Inventory) of student athletes attending a career assistance course differ from a control group?

3. Does readiness to retire (as measured by the Life Transitions Inventory for Athletes using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?

4. Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale) of student athletes attending a career assistance course differ from a control group?

Significance of the Study

Researchers have hypothesized that career transition from sport is often a traumatic experience (Baille & Danish, 1992; Petitpas, 1978). Unlike most other professions, many student athletes are faced with a much shortened work life upon graduation from school. For the vast majority of student-athletes, participation in organized athletics ends with graduation. Even the 1-2% of collegiate athletes who continue on in professional sports have an average playing life of less than five years (Figler & Figler, 1984). Athletes perform in an environment in which physical injury is common. Little (1969) identified the athletic neurosis and cautioned that exclusive and
excessive emotional dependence on any activity can place individuals in highly vulnerable states and may lead to severe emotional consequences in the event of threat or unexpected termination. In addition, many athletes develop a sense of “entitlement” that hinders motivation to work on careers outside of sport (Lanning, 1982).

This study will investigate the effectiveness of a career assistance offered to upper-class student athletes. An intervention program will be introduced with the hope of assisting student athletes with the life skills needed to be successful in a chosen career. Universities can begin to implement intervention programs while student-athletes are still participating in intercollegiate sport and assist in career planning, which otherwise might be overlooked. Student-athletes spend a great deal of time training, traveling, competing, and attending mandatory study sessions while other students are gaining valuable internship and work experience. With continued research, helping professionals will be able to assist student-athletes with programs that can “level the playing field,” and provide the necessary skills and strategies to make a positive transition out of sport participation. Athletic departments can benefit from a sport retirement program. No longer will students lag behind and spend unnecessary time taking courses just to continue receiving scholarship checks. Counselors in athletic departments can direct student-athletes into programs that will move them into appropriate careers. Coaches can also use a career preparation course as a recruiting tool, explaining to parents and student-athletes that the university will address the exit from sport participation. This program can also serve as a support system, since all of the participants will be at the end of their college careers and will be relying on each other as they move through the sport retirement transition. This
study will provide empirical data that should assist with the building of a model appropriate for the unique retirement experiences which all elite athletes must eventually face.

Definition of Terms

1. Student athlete- a student has been defined as “a person who studies, especially at a school or college (Webster’s, 1993) An athlete has been defined as “a person trained or gifted in exercises or contests involving physical agility, stamina, or strength” (Webster’s, 1993). For this study, a student athlete is defined as a student competing in any sport at a Division I school.

2. Level of career maturity- Career maturity is defined as “the maturity of attitudes and competencies that are critical in realistic career decision making” (Crites, 1978). The Career Maturity Inventory (Crites, 1978, p.5) Attitude Scale will be used to measure the various aspects of the career decision making process (e.g., decisiveness, involvement, independence, compromise) and consists of 25 true or false items. Level of career maturity will be operationally defined by the mean score on the CMI attitude subscale. The subscale consists of twenty-five items consisting of statements about finding a job or career.

3. Level of career decision making self-efficacy- Self-efficacy expectations are defined as a person’s beliefs concerning his/her ability to successfully perform a given task or behavior (Bandura, 1977). The Career Decision Making Self-Efficacy Scale (CDMSE; Betz and Taylor, 1994) will be used to measure self-efficacy expectations with respect to the process of career decision making. Level of career decision making self-efficacy will
be operationally defined by the mean scores on the five subscales of the CDMSE (Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving). The subscales each consist of ten items rated on a nine point scale with a range between ten and ninety.

4. Level of readiness to retire- The Life Transitions Inventory for Athletes (LTIA; Lantz, 1995) will be used to assess college student athletes’ readiness to retire from competitive sport. The instrument consists of four subscales: (a) athletic identity, (b) role conflict, (c) future planning, and (d) achievement satisfaction. Athletic identity is defined as “the degree to which an individual defines with the athletic role” (Brewer, 1993, p. 344). Role conflict occurs when the demands of one role are incompatible with the requirements of another (Chartrand & Lent, 1987). Future planning is defined as the ability to formulate mature educational and career goals (Sowa & Gressard, 1983). Achievement satisfaction is the degree to which an individual is satisfied by attaining his/her self-imposed goals. Level of readiness to retire will be operationally defined by the mean scores on the LTIA four subscales. The subscales each consist of ten items rated on a five point response scale with a range between 10 and 50.

5. Elite athlete- The term elite athlete describes athletes who have made sport participation a dominant or central part of their lives, unlike the recreational athlete who participates in sport for far less serious reasons. Examples of elite athletes include collegiate and professional athletes.
Conclusion

Student athletes are in a unique subculture of almost every college and university. Unlike the majority of college students, intercollegiate athletes have a regimented schedule that requires practice, training, traveling, and competing and does not allow much time for career exploration and work experience (Rhatghan, 1984). In addition, some athletes develop a “unidimensional,” lifestyle, which often hinders psychosocial personal growth (Brewer, 1993). Consequently, many student athletes enter a difficult transition in their lives when faced with sport retirement and for the first time are forced to pursue other career opportunities. This sport retirement phenomena has been studied sporadically over the last 25 years (Hill & Lowe, 1974), but few programs have been developed that assist student athletes through sport retirement. This study has been designed to assess the usefulness of a career development program intended to prepare student athletes for their sport retirement transition and assist them in pursuing careers outside of athletic participation.

Limitations

There are several limitations to this study that should be noted. The first limitation of this study has to do with generalizability. The small sample size and the ability for students to self-select into the course may limit how the results of this study may be generalized. In addition, the subjects used in this study were student athletes at a Division I school. These student athletes are probably different with their thinking about making it to the professional level than are athletes from Division II and III schools, where the odds are even greater to play at a level beyond college.
Another limitation that should be noted has to do with instrumentation, and how the course used in this study is not standardized. Future researchers may have trouble replicating this study due in part to the unique intra-class dynamics that may have related to how much the subjects were willing to disclose in class about their unique sport retirement transition.
CHAPTER 2

REVIEW OF LITERATURE

Transitions

As people move through life they continually face changes, or transitions. Transitions can be defined in a broad sense to mean obvious changes such as marriage, birth of a first child, and high school graduation. Transitions can also be subtle changes such as the loss of one's career aspirations and the nonoccurrence of anticipated events (e.g. a promotion that doesn't come through). A transition can be said to occur, "if an event or nonevent results in a change in assumptions about oneself and the world and thus requires a corresponding change in one's behavior and relationships" (Schlossberg, 1981, p. 5). For an experience to be classified as a transition, there should be (a) personal awareness of a discontinuity in one's life space, and (b) required new behaviors arising from the newness of the situation, the novelty of the required behaviors, or both (Hopson & Adams, 1977). A common non-event for student athletes may be the absence of a phone call on the day of the professional draft. Transitions are inevitable and sometimes unpredictable. Some common transitional events include changing careers, having
children, and getting married. Every transition has the potential to be a positive or negative experience, depending on the individuals' perception of the experience.

**Sport Retirement**

One particular type of problematic transition today is the issue of sport retirement for elite athletes. Baille and Danish (1992) contend that athletic retirement transition has been long overlooked as an area of research for three reasons: (a) career transition is an area that has been typically associated with the elderly, (b) the small numbers of individuals involved in elite or professional sports have led some to conclude such research is not worth the effort, and (c) there has not been a suitable model to be used with athletic retirement.

Schlossberg (1984) theorized that adaptation to transition depends on three interacting factors: (a) the characteristics of the transition, (b) the individual, and (c) the environment. These three variables can be viewed as potential assets or liabilities, depending on an individual’s appraisal of the transition, the self, and the personal environment.

The first factor identified by Schlossberg (1984), the transition, examines the trigger, timing, source, and duration of the transition; the role changes and current stress involved; and the individual’s previous experience with similar transitions. The second factor, the individual, includes personal and demographic characteristics such as socioeconomic status, age and stage of life, sex role, and state of health as well as
psychological resources such as ego development, personality, outlook, commitment and values, and coping skills. The third factor, the environment, examines available social support.

The Schlossberg model (1984) may provide the framework needed to adequately study the transition elite athletes face as they retire from sport. Using this model, sport specific variables such as forced versus voluntary retirement could be considered as variables related to the transition itself. Dependence on sport for identity and self-esteem, confidence, locus of control, and anticipatory socialization could be included as variables characterizing the retiring athlete. The role of coaches and their philosophies regarding preparation of the athlete for retirement could be included as environmental variables.

Historically, career termination issues of athletes has received little attention from researchers. Until the last 10 or 20 years, elite athletes were more fully integrated into society than they are today. Financial opportunities for elite athletes who become professionals easily separates them from "normal" people in society today, and the development of cable and satellite television has further glamorized the role of the elite athlete. This sudden "fame" can create a lifestyle that is often far different than the one that is likely to follow upon sport career termination.

Not every person who is involved in athletics undergoes a difficult transition upon retiring from a sport. One percent of all student athletes advance to any level of professional sport (Figler & Figler, 1984). Two percent of all college football players ever play in the National Football League (NCAA, 1990). For student athletes who do qualify to go on to the professional level, the average length of a career is three to four years.
(Dietzel, 1983, Holtz, 1993). In other words, there is over a 95% failure rate for college football players to play professionally, forcing them to retire which is often an immobilizing and traumatic experience. Even with such a high failure rate, Kennedy and Dimick (1987) found that 66% of the black athletes and 39% of the white athletes in a sample of 122 student athletes expected to play professional sports. Football is only one example of potential retirement difficulties. The odds of playing professionally in other sports are even lower (only 50 out of 500,000 college basketball players advance to the National Basketball League; NCAA, 1990). Many student athletes regardless of sport, gender, and race are left vulnerable to an abrupt and difficult transition of retiring from sport.

Hill and Lowe (1974) were two of the first researchers to examine the uniqueness of sport retirement. Retirement is defined as “a withdrawal from the social scene, and it can have both positive and negative connotations,” (Hill & Lowe, p. 8). On the one hand, retirement can be seen as the leisure time to which a person is entitled after a demanding career. Conversely, retirement can imply a diminution of certain abilities and the end of one’s usefulness to society. Goffman (1963) remarks that retirement carries an accompanying stigma and suggests that people assign a degraded or devalued status to retirement.

Sport retirement is a unique type of retirement. According to Hill and Lowe (1974), most industrial workers can anticipate retirement around the age of 60 or 65, whereas elite athletes may be out of their sport before they are half that age. Athletes may be especially vulnerable to the stress related to the retirement from sport because that
professional athletes actually “grow old” at an earlier age than other people. Unlike other professions, athletes typically reach their “peak of experience” in their late twenties or early thirties. At this point, the athlete must begin planning a fresh career, whereas other professionals may continue in their chosen careers until they reach a more typical retiring age. Industrial workers, for example, are typically not displaced by younger workers because of a decline in performance, which is precisely the case with the elite athlete.

Most industrial workers see retirement as a post-productive time and volunteer to move on (Hill & Lowe, 1974), whereas athletes see retirement as a time where they are going to be deprived of the satisfaction sport has given them and may not as easily volunteer to retire. Industrial workers usually do not retire to another career, whereas the relatively young athlete is left to pursue another career outside of sport, where he or she often has no skills or training.

The pampered treatment he [the elite athlete] has long received may have left him without basic skills for coping with life, skills like reading or writing, looking for a sale or balancing a checkbook, and now he suddenly confronts a mystifying world that is normal to most. The countless people who have left him with an unrealistic appraisal of himself and his value to the world, and now he suddenly confronts a society that is indifferent to his physical skills and is asking if he has any others? (Myslenski, 1986, p.20).
Causes of Athletic Retirement

Age

At some point in time even the most talented of athletes will notice a decline in their performance due to age alone. Depending on the sport, this skill deterioration may occur at a wide variety of ages. In a study of former Yugoslavian professional soccer players, 27% said that they were forced to retire because of their age (Mihovilovic, 1968). Svoboda and Vanek (1982) found that 13% of the Czechoslovakian national team athletes ended their careers because of age. Allison and Meyer (1988) in studying female tennis players found 10% of their sample retired due to age.

Deselection

Deselection is simply the process by which athletes are “cut,” or eliminated from the team primarily due to lack of skills. Sports function on the “survival of the fittest” principle, which places tremendous value on the players who survive, but pays little or no attention to those who are deselected (Ogilvie & Howe, 1982). Mihovilovic (1968) found that 7% of the Yugoslavian professional soccer players polled indicated they were “forced out” by younger players. Using the Figler and Figler (1984) statistic of only 1% of any college athlete progressing to the professional sport level, deselection many times forces retirement on athletes.

Injury

In any given year, an estimated 3 to 5 million recreational and competitive athletes experience a sports related injury (Kraus & Conroy, 1989). During every practice or game there is the opportunity for a career ending injury. Some writers have suggested
that injuries may result in serious distress such as depression, substance abuse, and even suicide attempts (Ogilvie & Howe, 1982). Career-ending injuries may cause athletes to experience social withdrawal (Lewis-Griffith, 1982), identity crises (Elkin, 1981), and fear, anxiety, and loss of self esteem (Rotella & Heyman, 1986). Mihovilovic (1968) reported that 32% of the Yugoslavian professional soccer players indicated sport-related injuries ended their careers.

Other Reasons

Three other less common causes for athletic retirement that have been recently cited include financial difficulties, problems with coaches and sport organizations, and free choice (Petitpas, Champagne, Chartrand, Danish, & Murphy, 1997). Some student athletes who are not on scholarships may not be able to sustain the rigorous schedule of being on a collegiate team and may be forced to quit sports in order to successfully complete an academic program. Even some scholarship athletes may have to consider leaving their team to provide financial support for their families. Some athletes retire from sport because of problems with a coach or conflicts with the philosophy of the sport organization. Finally, some athletes leave competitive sport because of their own free choice, either having reached their sport goals or “burned out” by the rigorous lifestyle.

Sport Retirement Theories

Although empirical studies on athletic retirement have only begun to surface in the last two decades, Rosenberg (1981) has compared several prevalent gerontological
theories for the suitability to athletic retirement. Four of these approaches (disengagement theory, activity theory, social breakdown theory, and continuity theory) are most appropriate to the study of athletic retirement.

Disengagement theory proposes that the mutual withdrawal of society and the aging individual from one another is beneficial to both. Rosenberg (1981) argued that since very few athletes withdraw from sport and instead are involuntarily “deselected” after lingering on, disengagement theory offers little to the understanding of athletic retirement.

Activity theory is based on the belief that a smoother transition occurs when there is no appreciable change in the retiree’s level of activity. Rosenberg (1981) argues that for many athletes, such a situation is nearly impossible. Few non-athletes are as physically active as athletes, and in-season practice and travel schedules for an athlete would be difficult to duplicate outside of sports.

Social breakdown theory assumes that external labeling becomes more likely when a role is lost (Kuypers & Bengston, 1973). If the label is unfavorable, social withdrawal is likely. This withdrawal and negative labeling may begin to cycle, promoting further withdrawal unless a process of social reconstruction is introduced. Social reconstruction (Baille & Danish, 1992) occurs when one’s self-concept is strengthened. The self-image may be enhanced by increased self-reliance or through some form of supportive counseling (Baille & Danish, 1992). Social breakdown theory has a clear application to sport retirement, particularly toward athletes who have developed maladaptive ways of coping with the distress of sport retirement.
In continuity theory, the energy devoted previously to the major role is redistributed among remaining roles (Rosenberg, 1981). No specific substitution is needed, as in activity theory, but a more subtle shift of energy and interests with respect to lifestyle. The less dramatic the change, the more continuity in the life of the retiree, and the higher the probability of a better adjustment. Rosenberg (1981) believed that because sport was such a major factor in an athletes’ life, a simple redistribution of energy was extremely unlikely. This theory predicts a difficult transition will occur for those so enmeshed in their career or role. Rosenberg also noted that this model accounts for a player’s desire to remain in baseball, even in a minor league capacity. Remaining in the game allows for a sense on continuity and a more satisfactory adjustment.

In contrast to social gerontological theories, the thanatological approach views retirement from sports much like that of a social death (Rosenberg, 1982). Thantalogical theory focuses on how members of a group treat an individual who has recently departed from the group. Social death is described as social isolation and rejection from the former group. Ball (1976) argued that a common reaction to an athletes’ release from a team is to ignore the athlete. Ignoring by former teammates can cause embarrassment and anxiety (Rosenberg, 1982).

Kubler-Ross’s human grieving model may also be applicable to the study of sport retirement (Kubler-Ross, 1969). Kubler-Ross has defined five distinct sequential stages in the grieving process that dying individuals proceed through as they prepare for this inevitable ending: (a) denial against the initial trauma; (b) anger about the perceived injustice and lack of control; (c) bargaining to delay the inevitable; (d) depression over
acceptance of the loss, and (e) full acceptance and a reorientation toward the future. Passage through these stages is viewed as a normal, or nonpathological, response to the prospect of dying. These stages are an ideal-type progression; thus, one should not assume that all dying individuals sequentially progress through these five stages only. Moreover, movement from one stage to another is not necessarily characterized by distinct or abrupt shifts. Rather, oscillation between stages is quite common (Kubler-Ross, 1969). According to Blinde and Stratta (1993), the majority of athletes they interviewed indicated their feelings with regard to sport retirement paralleled the Kubler-Ross stages of death and dying.

Factors Contributing to Athletic Career Termination Difficulties

Chickering (1969) has suggested that educational practitioners should use human development as the unifying, overarching educational purpose of colleges and universities “to encourage and enable intentional developmental change in students throughout the lifecycle” (p. 2). Chickering (1969) has suggested that among these developmental challenges are (a) growth in autonomy, (b) increased self-esteem, and (c) a sense of identity. Most college students are exposed to the wide range of influences, challenges, and experiences necessary for self-growth and discovery. Unfortunately, many elite athletes may be unable to access the same experiential opportunities as their non-athletic peers (Jordan & Denson, 1990). Kennedy and Dimick (1987) have suggested that college student athletes may be unprepared to take advantage of one of the most important aspects of the college experience which is the development of a realistic employment career. The question to be answered then is whether or not student athletes realize greater
self-growth and developmental achievement as a result of their athletic experience or do they suffer developmentally as a consequence of their athletic participation?

Some research suggests that involvement in intercollegiate sports does not facilitate the accomplishment of the developmental tasks that college students should achieve (Brown, 1993; Bulling, 1993). Brown (1993) found that athletes who chose sport careers and athletes as a group were significantly lower on the three areas of career maturity; decision making, world of work information, and knowledge of preferred occupational group. Blann (1985) found that student athletes at a high level of competition were less able to formulate mature educational and career plans than were college students in general.

Coakley (1978) has suggested that athletes are separated from the rest of the student body, thus creating a frustrating conflict between their roles as students and athletes. The demands of their sport require athletes to commit considerable amounts of time to their sport which often prevents them from participating in normal student activities as well as missing substantial amounts of class time. The time requirements necessary for elite sport participation lead many athletes to a sheltered life style which may not allow student athletes the necessary time or experiential opportunities to meet the developmental challenges that are associated with their age group (Coakley, 1978). The potential for role conflict problems has been cited by several authors (Adler & Adler, 1987; Chartrand & Lent, 1987; Rhatigan, 1984), and this issue is further exacerbated when the student athlete is faced with retirement from intercollegiate athletics and when skills in other life areas are lacking or have not been optimally developed.
Factors that Mediate the Response to Sport Retirement

Athletic Identity

A number of factors mediate the nature of an athlete’s response to career termination from sport. Elite athletes are confronted with potential psychological, social, and financial distress upon retirement from sport. The first and most fundamental factor to influence career termination is the degree to which athletes define their self-worth, or self-identity, in sports. “Elite athletes who have been immersed in their sport to the exclusion of other activities will have a self-identity that is composed almost exclusively of their sports involvement” (McPherson, 1980, p. 129). Athletic identity has been defined by Brewer (1993) as “ascribing great importance to involvement in sport/exercise and being especially attuned to self-perceptions in the athletic domain” (p. 238).

In its narrowest sense, athletic identity is a cognitive structure, or self-schema, that guides and organizes processing of self-related information. Therefore, a person with strong athletic identity is likely to interpret a given event (e.g. career termination) in terms of its significance to athletic functioning.

In its broadest sense, athletic identity is a social role or occupational self-image. The social definition of athletic identity acknowledges that the extent to which one labels oneself as an athlete may be strongly influenced by family, friends, coaches, and the media. Athletes who are heavily invested in their sport may be characterized as “unidimensional” people because their self-concept does not extend beyond the limits of the sport. (Ogilvie
& Howe, 1982). Athletes with such a strong sport identity typically experience career
termination as a very important loss and one from which they believe they may not recover
(Werthner & Orlick, 1986).

There are at least two qualities that appear to influence if and to what extent an
athletic identity is developed: duration and level of commitment to sport involvement
(Lantz, 1995). The duration of sport involvement has a profound effect on the
development of an athletic identity. Pickman (1987) found in his work with retiring
dancers that dancers who started at a very young age have “intensifying feelings of loss
and upheaval when retirement occurs” (p 201). In addition, athletes who become overly
invested in their sport participation may be seen as “unidimensional people” and may be

Identity Foreclosure

Erikson was the first researcher to discuss the concept of identity versus role
diffusion (1959). The concept of identity reflects an integrated sense of self, and is the
answer to the question “who am I?” Erikson claims that this stage occurs in adolescence
where the major developmental tasks involve giving a sense of industry versus inferiority
and making various work identification. According to Erikson, to emerge from
adolescence with a strong sense of identity requires that the self-concept evolve in two
ways. First, self-conceptions formed during the previous psychosocial stages must be
consolidated in a way that feels sensible. Second, this integrated self-view must itself be
integrated with the conception of oneself that others hold. Only by considering both views

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on the self does a rounded sense of identity emerge. Thus from Erikson’s perspective identity derives from a merger of private and social self-conceptions. The outcome of this integration is a sense of personal continuity or inner congruence.

The term foreclosure appears in the literature some time later when Marcia (1966) devised a method of classifying college men according to ego identity status based on Erikson’s writings. Marcia interpreted Erikson as requiring “all individuals to synthesize childhood identifications in such a way that he can both establish a reciprocal relationship with his society and maintain a feeling of continuity within himself” (p. 552). Marcia believes that individuals can successfully achieve their unique identity by experiencing a crisis in the form of being forced to choose from a series of meaningful alternatives. Marcia argued that by exploring the nature of a person’s commitments and by examining the presence or absence of crisis determined one’s ego identity status.

Marcia (1966) describes foreclosure as occurring when a commitment to an occupation is made prematurely and without sufficient exploration of one’s needs or values. Foreclosure can be brought on by the demands of the environment or may be the result of the individual choosing to forgo engaging in exploratory behaviors and instead opting to commit to the activity in which he/she has been previously rewarded. In other words, elite athletes who have been rewarded for their athletic talent may choose not to commit to seeking opportunities in other careers or vocations. By avoiding exploration, a sense of security is gained at the expense of one’s search for identity. Nevertheless, foreclosure is not always problematic but can become problematic when individuals fail to develop adequate coping skills. Moreover, foreclosure can be reduced or even avoided
through the process of exploration, individuals learn more about themselves, and additional social competencies through their interactions with others (Petitpas, 1978).

Two types of foreclosure have been identified: psychological and situational (Henry & Renaud, 1972). In psychological foreclosure, individuals avoid change at all costs. They rigidly hold to original commitments and avoid all challenges to their views as a means of maintaining their security. In situational foreclosure, individuals appear resistant to change, but this is a result of a lack of exposure to new ideas, information, or lifestyles rather than resistance to change. Waterman and Waterman (1974) hypothesized that it would be possible to distinguish between psychologically and situationally foreclosed students by using Kagan’s (1965) Matching Familiar Figures Test. This instrument measures reflection versus impulsivity that, according to Kagan, is a decision making style that is established early in life and operates in situations in which several possibilities are simultaneously available. Waterman and Waterman (1974) hypothesized that the failure of some foreclosed students to undergo crisis may have been a function of their use of a cognitive style characterized by rapid exclusion of alternatives after superficial investigation. This impulsive-decision style would be found as a part of the pattern that Henry and Renaud termed psychologically foreclosed. Those students who did not choose impulsively, however, would be representative of the situationally foreclosed. Their initial foreclosed status resulted from their lack of exposure to a broad range of alternatives. Thus, the researchers would posit that decision-making styles of subjects should predict subsequent change in the status of foreclosure. A further
understanding of these foreclosure types may assist in the understanding of
decision-making styles of elite athletes who struggle with the sport retirement
phenomenon.

Chickering (1969) described late adolescence and early adulthood as periods
during which a number of developmental tasks must be confronted, including managing
emotions, achieving competence, becoming autonomous, establishing relationships,
clarifying purpose, and developing integrity. The period described by Chickering closely
resembles Erikson’s (1950) individual identity versus role diffusion stage, where the
central process is role experimentation, in which the focus is on broadening one’s
horizons. If an individual continues to invest all of his or her energies in sport, he or she
may be impeded in the quest for personal identity (Petitpas & Champagne, 1988). The
immediate result may be role strain and frustration (Chartrand & Lent, 1987); the long
term consequences may be foreclosure of the search for an identity (Marcia 1966).

A strong, exclusive athletic identity is thought to be a risk factor for emotional
disturbance upon termination of the athletic career (Baille & Danish, 1992; Ogilvie &
Howe, 1986; Pearson & Petitpas, 1990; Werthner & Orlick, 1986). Individuals who
strongly commit themselves to the athlete’s role may be less likely to explore their strong
involvement in sport. This premature identity foreclosure (Marcia 1966) may leave an
athlete in crisis upon retirement, particularly forced retirement.

Studies Regarding Athletic Identity and Identity Foreclosure

Several recent studies provide support for the hypothesis that a strong, exclusive
athletic identity leaves an athlete vulnerable to emotional difficulties upon termination of
his/her athletic career. Lavallee, Gordon, and Grove (1997) examined how elite athletes coped with distressful reactions to retirement from sport. Forty-eight retired athletes from various national teams were asked to give a micronarrative account of their adjustment experiences during retirement from sport and were also administered the Athletic Identity Measurement Scale (Brewer et al., 1993). Findings indicated that the reporting of emotions and feelings associated with sport retirement was beneficial to the overall adjustment process, and that athletes with the highest levels of athletic identity were associated with the highest levels of emotional adjustment difficulties.

Brewer (1993) hypothesized that individuals who maintained a strong, exclusive identification with the athlete role would be more likely to become depressed following athletic injury than individuals without such identification. One hundred nine students enrolled at a Division I school volunteered to participate in four separate studies. The Athletic Identity Measurement Scale (AIMS; Brewer, Van Raalte, & Linder 1993) was used to measure athletic identity. The AIMS is an instrument with 10 items that reflects both strength and exclusivity of identification with the athlete self-schema role. The Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971) was used to assess depressed mood.

Results of all four studies showed a strong, exclusive identification with the athlete role linked with depressive reaction to a directly relevant negative life event (injury). The authors suggested that other identity disrupting events, such as athletic career termination,
would be positively associated as well. A few limitations to the study include using non-athletes as subjects, athletic identity matched only to injury, and the theoretical implication of an injury opposed to an actual injury.

Good, Brewer, Petitpas, Van Raalte, and Mahor (1993) investigated the relationship between self-identity variables (i.e. identity foreclosure and athletic identity) and college sport participation. Five hundred two students from four small colleges were used in the study. One hundred sixty-six students (71 females and 95 males) were intercollegiate athletes, 90 students (50 female and 40 male) were intramural athletes, and 246 students (180 female and 66 male) were non-athletes. Identity foreclosure was measured using the Objective Measure of Ego Identity Status (OM-EIS; Adams et. al., 1979). Athletic Identity was measured using the Athlete Identity Measurement Scale (AIMS; Brewer, 1993). Results indicated that identity foreclosure and athletic identity increase with level of sport participation. These findings suggest that intercollegiate student-athletes may commit to the role of “athlete” without exploring alternative identities. Two limitations of this study are, first, the cross sectional design does not permit causal conclusions regarding the relations among sport participation, academic standing, and self-identity (athletic identity and identity foreclosure) in college students. Second, participants were only from NCAA Division II and III institutions. Athletes competing in these divisions are rarely on scholarship and are generally more realistic about their chances to advance to the professional level. The researchers recommend investigating Division I athletes in the future, where the findings might be more pronounced with the expectation of turning professional is much higher.
Two recent studies have examined identity foreclosure and its effect on career maturity of athletes. Kennedy and Dimick (1987) investigated the maturity of career attitudes and realistic career expectations in male, intercollegiate scholarship athletes participating in revenue sharing sports (men’s football and basketball). The authors were interested in whether student athletes mature at the same rate as non-athletes through certain educational and career related stages of development. Undergraduate students at a mid-sized, midwestern university participated in the study. One hundred eighty-one non-athletes were used as the comparison group, and 122 football and basketball players were used as the experimental group. All subjects were given the Career Maturity Inventory (CMI, Crites 1978). Results suggested that intercollegiate athletes who participated in revenue sharing sports may possess lower levels of career maturity than other students. Career maturity is defined as the maturity of attitudes and competencies that are critical in realistic career decision making. Thirty-three percent of the athletes sampled met the criterion of career maturity impairment for high school seniors. Black athletes were the most at-risk group in the study. This study may suggest that athletes in revenue sharing sports are unrealistic in their expectations of entering professional sport.

Murphy, Petitpas, and Brewer (1996) examined the relationship between self-identity (identity foreclosure and athletic identity) and career maturity of student-athletes. Effects of gender, playing status, and revenue versus non revenue sport on career maturity were observed. Subjects were 124 intercollegiate student-athletes (99 male, 25 female) enrolled at a Division I university representing seven sports. Identity foreclosure was measured using the Objective Measure of Ego Identity Status (OM-EIS).
Athletic identity was measured with the Athletic Identity Measurement Scale (AIMS, Brewer et al. 1993). Career maturity was measured using the Career Maturity Inventory (CMI, Crites 1978). Results supported the hypothesis that identity foreclosure and athletic identity were inversely related to career maturity in intercollegiate athletes. Male varsity student athletes in revenue sharing sports were identified as the greatest at-risk group for poor career development.

Other variables identified by researchers that may mediate the nature of the athletes’ response to sport retirement include perceptions of control, pre-retirement planning, amount of social support, and achievement satisfaction. Socioeconomic status, minority status, health, and marital status are other less studied factors that may play a part in the sport termination transition.

Other Factors Affecting Sport Retirement Transitions

Werthner and Orlick (1986) conducted personal interviews with 28 of Canada’s best amateur athletes (Olympic medallists) to explore the transition of ending their sport careers. The results indicated that the majority of the athletes (88%) had faced some degree of difficulty in the transition out of their sport careers. Individuals with an alternative area in which to direct energies and commitments were able to more effectively make the transition out of the athlete role than individuals without such an alternative area. This finding suggests that elite athletes could greatly benefit from an intervention program that prepares them for a career without sports before their athletic career is over.

Adler and Adler (1987) observed college basketball players at a medium-sized, private university for four years, examining the changing salience of athletes’ athletic,
social, and academic roles. The researchers found that most student athletes' commitment to hard work in college academics was easily dislodged by their first few adverse experiences and by peers devaluation of academics. In contrast, their commitment to the athletic role was strengthened at this time because of their childhood dreams to one time play professionally. Regardless of playing time, the basketball players clung to the primary self-identification as athletes. Their athletic identity pervaded and dominated the identity of their other roles in almost all other situations, making this their “master” identity.

Blinde & Stratta (1993) researched the social psychological processes characterizing the experiences of athletes following involuntary and unanticipated exit from college sport. Extensive interviews were conducted with 20 athletes who were either cut from their team or whose entire sport program was suddenly eliminated. Athletes disclosed that they experienced a great deal of trauma and disruption in their lives and frequently equated their feelings with death and dying. The researchers argued that the responses from the athletes closely resembled Kubler Ross’ sequential stages of shock and denial, anger, bargaining, depression, and acceptance. Physical effects of the exiting process included loss of appetite, weight fluctuations, skipping menstrual cycles, and insomnia. Psychological effects experienced by the athletes were mood changes, a sense of being out of control, sadness about the loss of teammates, decline in motivation, and lack of trust in others.

The main factors making the transition problematic included the suddenness of the termination, unfinished business from participating in collegiate sport, sense of loss of
sport as their main identity, living in the same environment but not participating as an athlete on campus anymore, and their loss of an internal locus of control.

Perceptions of Control

The three primary causes of athletic retirement (age, deselection, and injury) all occur outside the control of the athlete. Mihovilovic (1968) reported that 95% of the athletes studied attributed their athletic retirement to causes beyond their control, and 52% retired suddenly. Additionally 29% of the Olympic caliber Canadian athletes experienced a decrease in their sense of personal control following retirement (Werthner & Orlick, 1986). Perceptions of control are related to many areas of personal functioning including sense of self-confidence (Deci 1980), the interpretation of self (Kelly, 1967), and self-confidence (Bandura & Adams, 1977). The absence of control with respect to sport retirement prohibits the athlete from preparing for the transition, unlike other workers who can prepare years in advance toward a projected retirement date. Thus, having a career assistance program available to athletes while they are still competing should be beneficial since the actual sport retirement transition many times cannot be predicted.

Social Support

Along the way to forming a self-identity from sport participation, athletes also are defined by their peers as having only a sport related social identity. Early studies by Pollock (1956) and Tuckman and Lorge (1953) associated non sport retirement with a loss of status and social identity. This issue can be especially significant to elite athletes, particularly with the media attention today’s athletes receive. McPherson (1980) argued that athletes define themselves in terms of their perceived popular status from fans,
however, this recognition typically lasts only a few years because of the short life span of an elite athlete. As a result, many athletes begin to question their self-worth when they no longer have this previous athletic identity.

Most student athletes will never play at any professional sport level, yet they are reinforced for their desire and ability by so many people that they do not tend to their career development concerns in the same way as students who are not athletes (Lanning, 1982). Blann (1985) found that participation in intercollegiate athletics may have a detrimental effect on student athletes’ ability to formulate mature educational and career plans. Using the Student Developmental Task Inventory (SDTI), it was asserted that high level athletes (NCAA Division I athletes) are less able to develop mature educational and career plans than low level athletes (NCAA Division III non scholarship athletes) and that freshman and sophomore male athletes at both competitive levels did not formulate mature educational and career plans to as great an extent as did same age non athlete males.

Yiannakis (1981) argued that athletes are preoccupied with training for and playing sports, and consequently may not give adequate attention to their educational and career plans.

Adler and Adler (1987) concluded that athletes may be willing to forgo their academic and career planning responsibilities because of several interrelated conditions: (a) an overwhelmingly demanding athletic role and powerful role influencers; (b) a peer subculture that emphasized both athletics and recreation while devaluing academics; (c) a series of frustrations in the academic realm caused by their poor academic training, a lack of study skills, the perceived irrelevance of their courses, and gradually diminishing effort; and (d) a scarcity of role reinforcing others in the academic world.
Arviko (1976) found that former professional baseball players who had a substantial number of social roles during their athletic careers were better adjusted than those athletes who had fewer social roles. Haerle (1975) reported that professional baseball players who continued their educations or held meaningful jobs during the off season had better occupational adjustment after their playing days were over. Mihovilovic (1968) also found that athletes who had not planned for another career after sports, the transition period was more difficult. Finally, Werthner and Orlick (1986) recommended educational and pre-retirement planning to provide other social roles for athletes while they are still competing. If this planning occurs athletes will be more likely to possess other roles that they can assume upon career termination.

Elite athletes’ primary social support system many times is derived from their athletic involvement with a sport organization (Coakley, 1983). The majority of an elite athletes’ friends, acquaintances, and other associations revolve around sport and their athletic life. When the career of an elite athlete ends, the athlete is no longer an integral part of the team. Consequently, the previous social support system may no longer be present. This absence or void may result in the elite athlete feeling isolated and lonely, leading to significant distress (Greendorfer & Blinde, 1985). A support system based entirely in the sports setting will limit athletes’ ability to acquire alternative roles and assume a non-sport identity (Remer, Tongate, & Watson, 1978).

The smoothness of the career transition process may depend to a large degree on the amount of social support the athlete receives (Coakley, 1983). Elite athletes who receive support from family and friends have an easier transition retiring from sport than
those who have little support (Werthner & Orlick, 1986). In addition, the athletes who had the most difficulties with the retirement transition indicated they felt alone as their careers ended and longed for support.

Social support is an important part of the career termination process according to Yugoslavian soccer players surveyed by Mihovilovic (1968). Seventy-five percent of their friends were from their sport team and 32% of the respondents stated that their circle of friends diminished following sport retirement. Additionally, retired professional football players who received the most support from friends and family demonstrated the highest level of satisfaction in their current job (Reynolds, 1981). When the sport retirement transition occurs, many athletes run into difficulties because they are without a strong support network and may find themselves dealing with difficult issues (i.e., loss of identity, loss of status) in a lonely, unsupported manner (Lantz, 1995).

**Achievement Satisfaction**

Probably the least understood factor in the sport retirement process is that of achievement satisfaction, or in other words, amount of “unfinished business” an athlete is preoccupied with. Achievement satisfaction is the degree to which individuals attain their self-imposed goals, and is based on the notion that considering the years of commitment reflected in the sport careers of collegiate athletes, playing up to one’s potential and realizing the best results of one’s investment may well have psychological effects extending beyond an athlete’s playing days (Buntrock, 1994). Werthner and Orlick (1986) have suggested that the feeling that goals had been reached tended to facilitate transition; feelings that the “expected medal” had not been achieved were expressed by many athletes.
who had difficulty in their transition experience. Generally speaking, athletes who had accomplished their sport related goals retired from competitive sport easier than those athletes who did not perform up to their expectations. Negative feelings associated with unmet goals may be even more difficult when the exit from competition is involuntary, as is the case with a career-ending injury. Blinde and Stratta (1993) found that athletes whose careers were cut short expressed regret for not “putting everything out” during their short career and the inability to achieve their personal and team goals.

Self-Efficacy

One psychological variable yet to be associated with sport retirement is self-efficacy, or the belief that one can effectively cope with a given situation (Bandura, 1982). Self-efficacy predicts confidence in the ability to deal with new changes and has been used to predict whether one will enter a new and unfamiliar situation, as well as the affective reactions to the situation (Bandura, 1982). The sport retirement transition is an example of a situation that is new to athletes and requires adjustment.

Lent and Brown (1996) argue that self-efficacy beliefs are acquired and modified through four primary informational sources: (a) personal performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) physiological states and reactions. From this list, the authors contend that personal accomplishments are generally seen as exerting the most influence on self-efficacy. Efforts to increase career-related self-efficacy have typically used some combination of the four sources (Betz, 1992; Speight, Rosenthal, Jones, & Gastenveld, 1995).
Hackett and Betz (1981) argued that low expectations of self-efficacy with respect to many career areas were a major mediator of gender differences in vocational choice and later vocational behavior. They reviewed evidence showing that the background experiences of men and women in American society differ markedly in terms of the sources of efficacy information they provide for subsequent career options, with the socialization of men providing efficacy information for a broader variety of career options than does the socialization of women.

A recent meta-analysis of career self-efficacy theory research supported the conclusion that stronger perceptions of self-efficacy with respect to various career related behaviors were significantly related to such outcome variables as range of career options considered, choice of persistence in math and science majors and careers, and performance (Multon, Brown, & Lent, 1991). In addition, researchers have also consistently found that the career decision making self-efficacy of college students is positively correlated with a variety of other career development measures, such as exploratory behavior (Blustein, 1989), vocational identity (Robbins, 1985), and career decision making attitudes and skills (Luzzo, 1993).

Layton (1984) was one of the first to discover that self-efficacy is superior to locus of control (the belief that one possesses the power to shape life’s outcomes) in explaining some aspects of career development. Specifically, she discovered that women’s ranges of perceived career options were better explained by self-efficacy than by locus of control. Furthermore, self-efficacy for nontraditional fields predicted college major choices better than did interests, ability, and a variety of other background variables.
Recent studies have shown that individuals preparing to exit the workforce respond more favorably to retirement when they believed that they have the skills and abilities needed to make the retirement transition. Taylor and Shore (1994) found that retirees’ self-rated ability to make the adjustment to retirement predicted planned retirement age. Fretz, Kluge, Ossana, Jones, and Merikangas (1989) found more favorable estimates of ability to make the change positively related to attitudes toward retirement, and higher self-efficacy was related to lower pre-retirement anxiety.

Because thinking about retirement increases for those planning to leave the workforce (McPherson & Guppy, 1979), athletes may benefit by preparing psychologically for the sport retirement transition as it approaches. MacLean (1982) found that beliefs about retirement, present before workforce exit, significantly predicted subsequent retirement adjustment. In addition, clarification of retirement expectations has been identified as a positive consequence of retirement planning (Howard, Marshall, Rechnitzer, Cunningham, & Donner, 1982; Wan & Odell, 1983).

Programs to Enhance Sport Retirement

Many elite athletes resist planning for their lives after the end of their careers (Chartrand & Lent, 1987). This lack of planning may be explained by the fact that any acknowledgement that their career might end would be a source of significant anxiety and therefore will probably be avoided at all costs. Yet it is this avoidance of pre-retirement planning that can have serious, potentially negative implications for athletes.

Post athletic career planning is a vital component to an effective career transition (Coakley, 1983). Haerle (1975) reported that 75% of the professional baseball players
surveyed did not plan for retirement from sport until the end of their careers. Svoboda and Vanek (1982) showed that 41% of the Czechoslovakian national team athletes admitted that they had paid no attention to retirement planning and 31% began to consider their future only immediately before termination.

With the onset of athletic retirement, some athletes encounter physical, psychological, social, and/or educational distress. With appropriate planning, the risk that an athlete will experience distress following retirement should decrease. Pearson and Petitpas (1990) recommend a holistic approach to sports development beginning early with young athletes. Adolescent and adult athletes many times develop into a "unidimensional" person who is role restricted and has placed a high priority on winning and progressing to the next level of competition. The first preventative step to a successful sport retirement begins early with parents and coaches (Ogilvie, 1987). Ogilvie recommends counselors convince parents and coaches of the importance of long-term personal and social development instead of short-term athletic success. Counselors should focus on developing self and social identities that are broader than athletics.

Working with elite athletes in early childhood may be recommended by some researchers, but not always possible. Instilling values, beliefs, and skills in developing athletes should make the sport retirement transition easier (Ogilvie 1987). Still, there are preventative measures that can be done prior to and during the sport termination process.

Werthner and Orlick (1986) have identified seven factors that may play a significant role in the sport retirement process based on their observations from working with athletes in transition:
1. **A New Focus.** Athletes who had something concrete and challenging to turn to upon sport retirement adapted easier upon sport retirement. Having school or another job were positively correlated to a successful retirement from sport.

2. **A Sense of Accomplishment.** For many of the athletes surveyed, the feeling of having accomplished all that they set out to achieve in their sport career was an important factor in helping ease the movement out of sport. Athletes who felt they had “unfinished business” may be the most at risk for a troubled sport retirement.

3. **Coaching.** The coaching situation, whether negative or positive, influences the way in which some athletes view their time committed to sport and the way in which they are able to cope with sport retirement.

4. **Injuries/ Health Problems.** The injury factor seems to be linked to a sense of accomplishment and a new focus. If an athlete were injured and forced to end their sport career prematurely, they often had not had the chance to plan for a new life outside of sport.

5. **Politics/ Sport Association Problems.** Many athletes spoke of problems with their sport association. Some athletes lose the desire to train and compete without their favorite coach.

6. **Finances.** Approximately half of the athletes sampled felt that their sport careers had caused them some degree of financial hardship, and attributed this hardship to a difficult transition out of sport.
7. **Support of Family/Friends.** For many athletes simply having someone to talk to and lend emotional support was very important. Several athletes who indicated that they had not been close to either their family or any friends experienced difficult transitions out of sport.

Ogilvie and Howe (1982) recommended counselors to help athletes explore ways of broadening their social identity and take on new, non-sport identities and experience feelings of value and self-worth outside of sport. Athletes should also be encouraged to expand their social support system to individuals outside of the sport arena. Wolff and Lester (1989) suggested counselors employ a three stage therapeutic intervention during the retirement process. This process involves listening, confrontation, cognitive therapy, and vocational guidance to aid athletes in developing a new identity.

Working from within the Schlossberg transition model, Pearson and Petitpas (1990) predicted that the transition process would be most difficult for athletes who:

1. Have most strongly and exclusively based their identity on athletic performance
2. Have had little prior experience with the same or similar transitions
3. Have the greatest gap between level of aspiration and level of ability
4. Are limited in their general ability to adapt to change because of emotional or behavioral deficits
5. Are limited in their ability to form and maintain supportive relationships
6. Must deal with the transition in a context (social and/or physical) lacking material and emotional resources could be helpful
Petitpas and Champagne (1988) examined developmental programs for student-athletes. According to the researchers, the goal of counseling 4th and 5th year student-athletes is to assist them in preparing for the transition after college. The focus in support groups should shift from personal and career exploration to career implementation and initial commitments. Job hunt strategies and career shadowing were also encouraged.

The CAPA Program

The Career Assistance Program for Athletes (CAPA) was developed to assist elite athletes in coping with the transition out of active sport (Petitpas, Danish, McKelvain, & Murphy, 1992). The CAPA program was developed from a grant in 1988 from the United States Olympic Foundation to address the specific needs of retiring elite athletes. The CAPA workshop focuses on three main topics: (a) managing the emotional and social impact of transitions, (b) increasing understanding and awareness of personal qualities relevant to coping with transitions and career development, and (c) introducing information about the world of work.

Athletes who go through the program are expected to address emotional and social aspects of the transition process and self-exploration, identify transferable skills that can be pulled from athletics to other non-sport vocations, imagine their ideal career, write journals, write a resume, role play job and informational interviews, and build goal ladders outside of sport. The authors provide a summary of the most frequently faced issues by athletes going through sport retirement:
1. Many athletes indicated they had no skills other than sport related skills.

2. Some athletes still clung to the idea that they were invincible and didn’t need assistance from anyone.

3. Athletes often expressed that they felt alone and misunderstood in the transition.

4. A number of athletes voiced frustration at the athletic system over inequities and political hassles within the sport governing bodies.

5. Many of the athletes voiced fears that investing effort in the career development process would detract from their sport performance.

The authors conclude with a summary of the three types of interventions provided to U.S. Olympic athletes: enhancement, support, and counseling. Enhancement takes place before the transition occurs and is aimed at expanding the range of available coping skills. Counselors should assist athletes in identifying their transferable skills from sport, help promote the athletes’ personal competence, and expand their sense of self-efficacy in life planning. The second phase of social support occurs during the actual transition. This social support is different because the athlete is being helped to retire, not to compete. Self-disclosure amongst a group of athletes going through the same transition is encouraged. The final area of intervention is counseling. These services take place after the transition has occurred. Substance abuse, eating disorders, and self-destructive actions are among the behaviors that have been observed in some athletes who were having difficulty coping with the transition from sport (Ogilvie et. al., 1986). Results from this program showed that 72% of the participants indicated they were very satisfied with the workshop (Petitpas, 1992).
The STRATEGIES Program

Another career assistance program for athletes is STRATEGIES: A Model of Career Development for Student Athletes (Coleman & Barker, 1991). This program was designed to meet the career concerns of the student athlete population and consists of six components: (a) introduction and orientation; (b) self assessment; (c) decision-making; (d) educational, occupational, and community information; (e) preparation for work, leisure, and retirement; and (f) research and evaluation.

Self-assessment, the foundation of STRATEGIES, has its antecedents in the theoretical framework of Super’s (1957) developmental self-concept theory of vocational behavior. Super suggests that individuals attempt to implement their self-concept by choosing to enter the occupation they perceive as providing the most opportunity for self-expression. He also indicates that the specific behaviors individuals engage on are a function of their stage in life development. The STRATEGIES model of career development for student athletes emphasizes self-assessment, self-concept development, and self-esteem, which incorporate the identification of one’s values, interests, abilities, and personality.

The first stage of the STRATEGIES program is the introduction and orientation. The purpose is to introduce the concept and process of career development and how it is an ongoing, lifelong process. The next component of the program is self-assessment, which is the foundation of the career development process. Here the individual examines
four personal variables - values, interests, abilities, and personality - as they relate to
career development. A focus of this part of the program is answering the question, “Who
am I?”

The third phase of the program is on decision making. Principles, strategies, and
styles of decision making are explored, with particular emphasis placed on identifying the
student athlete’s strategies and styles. The next phase focuses on educational,
occupational, and community information. Resources such as educational institutions,
businesses, and community agencies are highlighted for their contributions to the career
development process.

The fifth stage in the STRATEGIES program, preparation for work, leisure, and
retirement, focuses on the basic elements of the job search such as resume preparation,
interviewing, and job maintenance skills. Students are encouraged before sport retirement
to consider how their leisure and recreational time can be used to advance
self-actualization. Student athletes must understand that their athletic skills and talents are
transferable to other career opportunities. Coleman and Barker (1991) warn of potential
barriers in the process of career development for student athletes as they exit from sport
participation. Internal barriers include: low self esteem, lack of confidence, low levels of
career maturity, inadequate decision-making skills, lack of previous work experience, and
conflicts between personal values and athletic goals. Some external barriers include: few
role models, lack of mentors, family expectations, societal expectations, inadequate
educational preparation, and lack of career guidance.
For counselors wanting to start their own intervention career development program for student-athletes, the authors recommend a group counseling approach that focuses on values clarification and how to make better decisions, the identification of transferable skills, and specific instruction on relating to the public image (e.g. communicating with the media).

**The Life Development Intervention (LDI) Program**

The Life Development Intervention (LDI) is another transition model that resembles the Schlossberg (1981) model but is sport specific (Danish et. al., 1992). Although there is much overlap between the two models, the LDI is unique in that it links transitional theory to an intervention framework. Transitions are not seen as discrete, but as ongoing processes with psychological, social, and biological components.

**Reality Therapy**

There has also been some mention of specific therapeutic modalities applicable to athletes going through the sport retirement transition. Bartolini (1994) has recognized the usefulness of reality therapy in athletic counseling, particularly with academic and career-related issues. Reality therapy has its roots in Control Theory (Glasser, 1985) which makes the argument that all human behavior is a purposeful, internally generated attempt to fulfill the four basic needs of belonging and love, power (achievement, self-worth), fun, and freedom. Reality therapy refutes the medical model of mental illness, and implies that the responsibility for healing someone lies within the individual (Glasser, 1965). There are two major components in the practice of Reality Therapy: (a) establishing a counseling environment conducive to change; and (b) adhering to specific procedures that lead to
these changes. Some of these specific procedures include being friendly with the client(s), avoiding discussion of the past, and not accepting excuses for irresponsible behavior. The intervention course used in this study (Positive Transitions) was designed so that student athletes were enrolled in the course with other student athletes and could use one another for social support through the sport retirement transition. Student athletes were discouraged from talking about the past and dwelling on what "could have been" regarding making it to the professional level. The instructors also confronted student athletes when they made excuses as to why they did not make it past the collegiate level.

Summary

The purpose of this study is to examine the effects of a career assistance program designed to help student athletes through the sport retirement transition. Many elite athletes expect to play in professional sports, but NCAA statistics show that only approximately two percent of all college athletes actually advance to the professional level (Figler & Figler, 1984). Even if an athlete should be "lucky" enough to advance to the professional level, the average length of service is usually not more than five years (Figler et al., 1984). Elite athletes in college understandably want to play professionally. Many professional players make salaries of many millions of dollars, and some professional athletes have endorsement contracts that pay them as much or more than their actual salary. A certain fame or celebrity status also comes along with being a professional athlete, with interviewers and television camera's monitoring every detail.

A problem faced by educators is the large number of student athletes who not only dream of being a professional athlete, but actually plan to advance to the professional level
and disregard examining other more realistic career options. With continued research and exploration of new programs, student-athletes can be better prepared to plan for their future while they are still in college. Researchers have begun to acknowledge the sport retirement transition phase as a potentially problematic time for athletes. This study will provide empirical data that will enable counselors and teachers to build future programs that will assist all student-athletes in making mature career decisions. The results of this study will also yield data much needed to build a specific sport retirement model applicable to today's athlete. Finally, the entire sport system can use this information to educate coaches and parents on the importance of future career planning for the day when sport participation is no longer a future option.
CHAPTER 3

METHODOLOGY

Although sport retirement is an inevitable and many times difficult transition that every athlete must face, very little is known as to what can be done to assist athletes through this period when they can no longer play at an elite level. Although studies of transition out of sport are sparse in scientific journals, this issue has received considerable attention in the popular press. These articles are typically “after the fact” and focus almost exclusively on professional athletes (Hoffer, 1990; Putnam, 1991). Thus far, relatively little research has been done with respect to the college athlete and sport retirement. The purpose of this study is to determine the relationship between participation in a career assistance intervention program based on reality therapy (Boterelli, 1994) and student athletes’ career maturity, readiness to retire, and career decision making self-efficacy.

Research Questions

1. What are the demographic characteristics of the student athletes enrolled in a career assistance course at a large midwestern university (gender, race, grade point average, scholarship status, and type of sport played)?
2. Does career maturity (as measured by the Career Maturity Inventory, Crites, 1978) of student athletes change after attending a career assistance course?

3. Does readiness to retire (as measured by the Life Transitions Inventory, Lantz, 1995, for Athletes using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?

4. Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale, Taylor & Betz, 1994) of student athletes attending a career assistance course differ from a control group?

Research Design and Methodology

As illustrated in Figure 1, the research design will be a recurrent institutional cycle design, which is known as Campbell and Stanley’s # 15 design (Campbell & Stanley, 1963). In this study, 4th and 5th year student athletes enrolled in a two-credit hour career assistance program either Autumn quarter 1997 or Winter quarter 1998 were the experimental groups and another group of 4th and 5th year student athletes not enrolled in the career assistance program were the control group. This quasi-experimental design is appropriate “to those situations (e.g., schools) in which a given aspect of an institutional process is, on some cyclical schedule, continually being presented to a new group of respondents” (Campbell & Stanley, 1963, p.57). This research design starts with an inadequate design and then adds various observations to control for sources of invalidity.
which results in an accumulation of precautionary checks. Because quasi-experimental
designs do not require randomization, they can be used where experimental designs are
not possible (Campbell & Stanley, 1963).

<table>
<thead>
<tr>
<th>Autumn Quarter (9/97 - 12/97)</th>
<th>X</th>
<th>O1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Quarter (1/98 - 3/98)</td>
<td>O2</td>
<td>X</td>
</tr>
<tr>
<td>Control Group (3/98)</td>
<td></td>
<td>O4</td>
</tr>
</tbody>
</table>

Figure 1: Research Design # 15 (Campbell & Stanley, 1963)

This design combines the “longitudinal” and “cross-sectional” approaches found in
various other research designs. As shown in Figure 2, by using this design, nearly every
threat to internal validity is addressed. The comparison between the Autumn Quarter
posttest scores and Winter Quarter pretest scores corresponds with the Static Group
comparison, Design # 3 (Campbell & Stanley, 1963). The cross-sectional comparison of
O1 > O2 provides differences which could not be explained by the effects of history or a
test-retest effect (Campbell & Stanley, 1963). Instrumentation is accounted for when the
testing is all done at the same time, as is the case in this study. Remeasuring the Winter
Quarter group posttest scores against pretest scores (O3 > O2) provided the One Group
Pretest-Posttest segment, Design # 2. If this comparison provides the same type of difference as does the O2< O1 comparison, then selection and mortality may also be ruled out.

To control for the threat of maturation, two observations were taken. The Autumn Quarter posttest (O1) was measured against the control group scores at the end of Winter Quarter (O3); and the Winter Quarter pretest scores (O2) was measured against the control group scores at the end of Winter Quarter (O4). These two measurements should produce no differences if maturation was not a factor.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>History</th>
<th>Maturation</th>
<th>Testing</th>
<th>Instrument</th>
<th>Regression</th>
<th>Selection</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1 &gt; O2</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>?</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>O3 &gt; O2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>?</td>
<td>?</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>O3 &gt; O4</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>?</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>O2 = O4</td>
<td>+</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>O1 = O3</td>
<td>+</td>
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</tr>
</tbody>
</table>

Note: O1= Autumn posttest; O2= Winter pretest; O3= Winter posttest; O4= Control Group

Figure 2: Threats to Internal Validity
Figure 3 illustrates that the recurrent institutional cycle design controls for each threat to external validity as well. The interaction of testing and X was examined using two comparisons, O1 > O2 and O3 > O4. Because the Winter class was not split into two randomly assigned groups as the original Campbell and Stanley design suggests, there is no threat for reactive arrangements. Finally, the question marks in the "Interaction of Selection and X" are merely a warning that the findings are limited to the institutional cycle under study (Campbell & Stanley, 1963).

<table>
<thead>
<tr>
<th>Comparison:</th>
<th>Int. of Testing/ X</th>
<th>Int. of Selection/ X</th>
<th>Reactive Arr.</th>
<th>Multiple X Int.</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1 &gt; O2</td>
<td>+</td>
<td>?</td>
<td>+</td>
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</tr>
<tr>
<td>O3 &gt; O2</td>
<td>-</td>
<td>?</td>
<td>+</td>
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<td>O3 &gt; O4</td>
<td>+</td>
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<tr>
<td>O2 = O4</td>
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<tr>
<td>O1 = O3</td>
<td></td>
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</tbody>
</table>

Note: O1 = Autumn posttest, O2 = Winter pretest, O3 = Winter posttest, O4 = Control Group

Figure 3: Threats to External Validity

Finally, Campbell and Stanley (1963) argue that the combination of longitudinal and cross-sectional comparisons should be employed more often in developmental studies.
because "the cross-sectional study by itself confounds maturation with selection and mortality" (p.60). The longitudinal study confounds maturation with repeated testing and with history.

Sampling Frame

The target population for the study was fourth and fifth-year male and female intercollegiate athletes. The sampling frame was fourth and fifth-year male and female student athletes enrolled at The Ohio State University with varsity sport experience prior to the 1997-98 academic year. Student athletes may be scholarship or non-scholarship and may be a member of any one of the 34 varsity sports offered at The Ohio State University.

Sampling

The sample for this study was a convenience sample. All fourth and fifth year student athletes were sent a sign-up sheet before autumn quarter 1997 to enroll in the program. The control group consisted of fourth and fifth year student athletes who were not enrolled in the program. Subjects volunteered to participate in the career assistance program by responding to announcements mailed to them personally or to their coaches. The first 25 student athletes who signed up for the program during Autumn and Winter Quarters comprised the experimental group. Although these persons self-selected into the program, the order in which people signed up and thus the group to which they were assigned was essentially random.
Instrumentation

The independent variables for this study were demographic variables and the intervention program. The scaling of the demographic variables as follows: (a) type of sport played; revenue or non-revenue (nominal); (b) gender (nominal); (c) race; Caucasian or non-Caucasian (nominal); and (d) grade point average; above or below 2.5 Grade Point Average (nominal).

The dependent variables for this study were scores on three measures: The Career Maturity Index (CMI, Crites, 1978); The Career Decision Making Self-Efficacy Scale (CDMSE; Taylor and Betz, 1983); and The Life Transitions Inventory for Athletes (Lantz, 1995).

The Career Maturity Index (CMI) is an instrument designed to measure the critical levels of attitudinal maturity and competency that exist in career decision making (Crites, 1978). The CMI attitude scale assesses various aspects of the career decision-making process (e.g., decisiveness, involvement, independence, compromise) and consists of 25 items in a true/false response format. Scores can range from 0-25 with lower scores indicating lower career maturity. Adequate stability (r = .71 over a 1 year period) and internal consistency (K-R 20 coefficient = .74) have been demonstrated for the CMI Attitude scale. Crites (1973) offered support for the content, criterion-related, and construct validity of the CMI Attitude scale.

Career decision making self-efficacy assessed using the five subscales of the Career Decision Making Self-Efficacy Scale (CDMSE). The CDMSE is a 50 item instrument designed to measure self-efficacy expectations with respect to the process of career
decision- making. The instrument provides five subscale scores each worth 10 points (Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving) and a total score for the 50 items. Career self-efficacy expectations are assessed by requesting the respondent to indicate his or her ability to successfully complete each task. Responses are scored on a 10-point scale ranging from Complete Confidence (9) to No Confidence (0).

Confidence scores for each of the five subscales are calculated from the sum of responses to the 10 scale items; the maximum subscale score is 90. A total score reflecting self-efficacy expectations with regard to all 50 career decision-making tasks is calculated by summing the confidence ratings for the 50 items; the maximum score on the CDMSE is 450.

Internal consistency reliability was reported by Taylor & Betz (1983); values of coefficient alpha of the 10-item subscales were .88, .89, .87, .89, and .86 for Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving, respectively. Cronbach’s alpha for the total 50-item score was .97.

Taylor and Popma (1990) suggested that the CDMSE measures career decision making across a broad range of career decision making behaviors and that it may be “best characterized as a generalized career self-efficacy measure covering a multifaceted domain of career decision-making behaviors” (p. 28).

Evidence of concurrent validity was provided by significant correlations with Osipow, Carney and Barak’s (1976; Osipow, 1987) Career Decision Scale (CDS). Correlations of the CDMSE with the CDS ranged from .29 with the Problem Solving
subscale to -.48 with Goal Selection; the correlation between the total CDMSE and CDS scores was -.40. Thus, higher levels of career decision making self-efficacy are associated with lower levels of career indecision. Evidence of discriminant validity (Campbell & Fiske, 1959) was supported by the relationships between the CDMSE scores and scholastic aptitude test.

Readiness to retire from athletics will be measured using the four subscales of the Life Transitions for Athletes (LTIA, Lantz, 1995). The LTIA is a 40 item, self-report inventory comprised of four independent subscales (Athletic Identity, Role Conflict, Future Planning, and Achievement Satisfaction). Cronbach alpha reliability coefficients were .88, .86, .81, and .80 for the athlete identity, role conflict, future planning, and achievement satisfaction subscales, respectively.

Intervention

Participation in the intervention program was coded as either yes or no (nominal). The intervention program was twenty hours and was completed in ten, two-hour weekly sessions. Topics covered in the program were identity development and exploration, goal-setting, decision making, communication skills, career development, and future planning. Weekly attendance and homework assignments were monitored by the instructor to ensure participation. Students were permitted to have one absence from class during the quarter, but all assignments and readings had to be completed to earn a Satisfactory overall grade. After an introduction to the course, instructors, and reading materials week one, the remainder of the course was structured as follows (see appendix for weekly curriculum):
1. Identity development and exploration (2 classes; 4 hours). Students will explore their athletic identity and evaluate transferable skills that can be applied outside of athletic participation to vocations outside of sport. Readings will be provided depicting athletes that have had problematic sport retirement issues.

2. Goal-setting (1 class; 2 hours). Goal-setting tips and techniques will be taught and students will learn how to set goals outside of the sport domain directed toward vocational exploration.

3. Decision making (1 class; 2 hours). A decision-making model will be discussed and students will be required to identify and explore major decisions at this point in their lives, particularly educational and career decisions.

4. Communication skills (1 class; 2 hours). Students will discuss the significance of communication skills and be taught ways to communicate more effectively with potential employers. Assertiveness training will be taught and students will role play scenarios in fictitious interview settings.

5. Career skills and strategies (3 classes; 6 hours). Students will learn of the career resources available to them both on campus and in the community. Resume writing, occupational interview training, and networking will be discussed. Students will be required to visit their academic advisors and develop contacts with local employers relevant to their vocational choice.

5. Future planning (1 class; 2 hours). Students will write a clear game plan for their future and be exposed to additional resources specific to their career choices.
Data Collection

Data collection began the first week of classes Autumn Quarter 1997. Subjects both in the control group (not enrolled in the class) and the experimental group completed a demographic questionnaire regarding grade point average, type of sport played, gender, and race. All students enrolled in the Autumn Quarter 1997 course were administered the CMI, LTI-A, and the CDMSE during finals week of the quarter.

In addition to the subjects enrolled in the Autumn Quarter 1997 intervention class (n=11), a second group of subjects who enrolled in the Winter Quarter 1998 class (n=14) were tested for the study. Subjects were given the same demographic sheet and tested using the same instruments at the beginning and end of the course. The control group were tested at the end of Winter Quarter 1998. In total, eleven students completed the course Autumn 1997, fourteen completed the course Winter Quarter 1998, and forty-two students were tested as part of the in control group and were offered the course at another time during the year.

Data Analysis

Data were analyzed using descriptive statistics: means, standard deviations, medians, and modes. Mann Whitney U tests were used to compare mean differences between the treatment and control groups. Mann Whitney U tests are used to test independent samples when sample size is small and distributions are not symmetrical. Point biserial correlation coefficients were calculated for measures of association.

For research question #2, the independent variable is group membership (control or experimental). This is a categorical variable with two levels. The dependent variable is
level of career maturity as measured by The Career Maturity Inventory (Crites, 1978).

Mann Whitney U tests were used to compare mean differences between the treatment and control group, and the measure of association was point biserial correlation coefficient.

For research question #3, the independent variable is group membership (control or experimental). This is a categorical variable with two levels. The dependent variable is level of readiness to retire as measured by the Life Transitions Inventory for Athletes (LTIA; Lantz, 1995). Mann Whitney U tests were used to compare mean differences between the treatment and control groups, and the measure of association was point biserial correlation coefficient.

For research question #4, the independent variable is group membership (control or experimental). This is a categorical variable with two levels. The dependent variable is level of career self efficacy as measured by the Career Decision Making Self-Efficacy Scale. Mann Whitney U tests were used to compare mean differences between the treatment and control groups, and the measure of association was point biserial correlation coefficient.
CHAPTER 4

RESULTS

This chapter presents the findings of the research study, beginning with a summary of the data sample followed by results of the research questions outlined in the previous chapter. The research questions are listed below:

Research Questions

1. What are the demographic characteristics of the student athletes enrolled in a career assistance course at a large Midwestern university (gender, race, grade point average, scholarship status, and type of sport played)?

2. Does career maturity (as measured by the Career Maturity Inventory, Crites, 1978) of student athletes change after attending a career assistance course?

3. Does readiness to retire (as measured by the Life Transitions Inventory for Athletes, Lantz, 1995, using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?
4. Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale, Taylor & Betz, 1994) of student athletes attending a career assistance course differ from a control group?

Sample

All 189 fourth or fifth year student athletes enrolled at The Ohio State University during the 1997-98 school year were eligible to participate in the study. The career assistance intervention course (Positive Transitions for Student Athletes) was open to enrollment Autumn Quarter, 1997 and Winter Quarter, 1998. Although the course was not listed in the College bulletin, a flyer with the course description and call number were posted at several locations where the athletes passed through daily (i.e., study table, training room, locker room, and practice facilities). In addition, all 34 varsity coaches were distributed the same flyer and reminded of the course offering at the Autumn Coaches Meeting in September, 1997.

Data were collected from both the student athletes enrolled in the Autumn and Winter Quarter classes, as well as from another group of fourth and fifth year student athletes who chose not to enroll in the course. Data were collected over two quarters (11 students enrolled in Autumn, 14 in Winter). Figure 1 illustrates the research design and when data were collected.
Autumn Quarter  
(9/97 - 12/97)     | X | O1 | 
--- | --- | --- | --- |
Winter Quarter  
(1/98 - 3/98)    | O2 | X | O3 |
Control Group  
(3/98)             |   |   | O4 |

Figure 1: Research Design # 15 (Campbell & Stanley, 1963)

Procedures

In order for students to receive a satisfactory grade for the Positive Transitions course and thus be eligible for the study, students were required to attend at least 90% of the classes and submit all required homework and assignments. All students represented in the two treatment groups fulfilled this requirement. Control group subjects were student athletes who had not taken the course, and they completed the instruments at the end of Winter Quarter (March, 1998).

All subjects in the study were administered three tests in addition to a demographic questionnaire designed by the researcher. The instruments used in the study and the subscales of each are The Life Transitions Inventory for Athletes (Achievement Satisfaction, Athletic Identity, Future Planning, and Role Confusion; Lantz, 1995), The Career Decision Making Self Efficacy Scale (Self Appraisal, Problem Solving, Planning, Occupational Information, and Goal Selection; Taylor & Betz, 1994), and The Career
Maturity Inventory (no subscales, but an overall raw score indicating level of career maturity; Crites, 1978). It was hypothesized that if the Positive Transitions intervention course had an effect, student athletes' scores would shift in different directions depending on the subscale. The desired directions are shown in Table 1.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Desired Direction of scores after the intervention Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LTIA</strong></td>
<td></td>
</tr>
<tr>
<td>Achievement Satisfaction</td>
<td>Lower</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>Lower</td>
</tr>
<tr>
<td>Future Planning</td>
<td>Higher</td>
</tr>
<tr>
<td>Role Confusion</td>
<td>Lower</td>
</tr>
<tr>
<td><strong>CDMSE</strong></td>
<td></td>
</tr>
<tr>
<td>Self Appraisal</td>
<td>Higher</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>Higher</td>
</tr>
<tr>
<td>Planning</td>
<td>Higher</td>
</tr>
<tr>
<td>Occupational Information</td>
<td>Higher</td>
</tr>
<tr>
<td>Goal Selection</td>
<td>Higher</td>
</tr>
<tr>
<td><strong>CMI</strong></td>
<td></td>
</tr>
<tr>
<td>Career Maturity</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Table 1: Expected Direction of Subscale Scores After Participation in The Positive Transitions Career Assistance Intervention Program.

Research Question #1: What are the demographic characteristics of the student athletes enrolled in a career assistance course at a large Midwestern university (gender, race, grade point average, scholarship status, and type of sport played)?
For the study, demographic data were collected across five independent variables (race, scholarship, grade point average, type of sport played, and gender). All variables were dichotomized as follows: race was divided by either white or non-white, scholarship by either receiving one or not receiving one, grade point average was divided into a high and low group (2.5 and above high, 2.49 and below low), type of sport played was divided by revenue sharing sports and non-revenue (the revenue sharing sports were men’s football, basketball, baseball, and women’s basketball). Gender was male or female. The complete breakdown of the variables are shown in Table 2.

<table>
<thead>
<tr>
<th>Group</th>
<th>Race</th>
<th>Scholarship</th>
<th>GPA&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Sport&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>NW</td>
<td>Yes</td>
<td>No</td>
<td>High</td>
</tr>
<tr>
<td>Overall</td>
<td>148</td>
<td>41</td>
<td>142</td>
<td>47</td>
<td>135</td>
</tr>
<tr>
<td>(n=189)</td>
<td>78</td>
<td>22</td>
<td>75</td>
<td>25</td>
<td>71</td>
</tr>
<tr>
<td>Treatment Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AU QTR 1997 (n=11)</td>
<td>9</td>
<td>2</td>
<td>10</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>(n%)</td>
<td>82</td>
<td>18</td>
<td>91</td>
<td>9</td>
<td>55</td>
</tr>
<tr>
<td>WI QTR 1998 (n=14)</td>
<td>9</td>
<td>5</td>
<td>12</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>(n%)</td>
<td>65</td>
<td>35</td>
<td>86</td>
<td>14</td>
<td>57</td>
</tr>
<tr>
<td>Control (n=42)</td>
<td>29</td>
<td>13</td>
<td>39</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>(n%)</td>
<td>69</td>
<td>31</td>
<td>92</td>
<td>8</td>
<td>76</td>
</tr>
</tbody>
</table>

GPA<sup>a</sup>: low ≤ 2.49; high ≥ 2.50  
Sport Type<sup>b</sup>: R= Revenue; NR= Non-Revenue

Table 2: Summary of Demographic Characteristics by percentage of Fourth and Fifth Year Student Athletes at The Ohio State University 1997-1998 Overall and by Treatment Group.
Results

Because of the large number of tests ran in each of the following tables, there was a possibility of Type I error inflation. Consequently, alpha was split within each family of tests (by instrument). Thus, the familywise alpha was split between four tests for the LTIA, five tests for the CDMSE, and one test for the CMI. The critical values for the \( z \)-tests are shown in each table. Research questions 2, 3, and 4 are:

2. Does career maturity (as measured by the Career Maturity Inventory) of student athletes change after attending a career assistance course?

3. Does readiness to retire (as measured by the Life Transitions Inventory for Athletes using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?

4. Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale) of student athletes attending a career assistance course differ from a control group?

For research questions 2, 3, and 4, the independent variable is group membership (control or experimental). This is a categorical variable with two levels. The dependent variables are level of career maturity as measured by The Career Maturity Inventory (Crites, 1978), level of readiness to retire as measured by the Life Transitions Inventory for Athletes (LTIA; Lantz, 1995), and level of career self-efficacy as measured by the Career Decision Making Self-Efficacy Scale (Taylor & Betz, 1994). Mann Whitney U
tests were used to compare the two group means, and the measure of association was the point biserial correlation coefficient. The Mann Whitney U test is used when sample size is small and distributions are not symmetrical. Skew, kurtosis, and boxplots were examined to determine if the distribution could be considered normal. Table 3 gives the skew and kurtosis and their standard errors by variable.
<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Skew</th>
<th>SE</th>
<th>Kurtosis</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LTIA</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Satisfaction</td>
<td>36.56</td>
<td>9.20</td>
<td>-0.506</td>
<td>0.267</td>
<td>-0.397</td>
<td>0.529</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>33.19</td>
<td>7.72</td>
<td>0.135</td>
<td>0.267</td>
<td>-0.322</td>
<td>0.529</td>
</tr>
<tr>
<td>Future Planning</td>
<td>39.08</td>
<td>4.69</td>
<td>-0.567</td>
<td>0.267</td>
<td>0.208</td>
<td>0.529</td>
</tr>
<tr>
<td>Role Confusion</td>
<td>33.69</td>
<td>7.20</td>
<td>0.316</td>
<td>0.267</td>
<td>-0.355</td>
<td>0.529</td>
</tr>
<tr>
<td><strong>CDMSE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Appraisal</td>
<td>71.35</td>
<td>7.20</td>
<td>-0.572</td>
<td>0.267</td>
<td>0.040</td>
<td>0.529</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>65.98</td>
<td>12.59</td>
<td>-0.543</td>
<td>0.267</td>
<td>0.783</td>
<td>0.529</td>
</tr>
<tr>
<td>Planning</td>
<td>69.69</td>
<td>12.59</td>
<td>-0.305</td>
<td>0.267</td>
<td>-0.839</td>
<td>0.529</td>
</tr>
<tr>
<td>Occupational Information</td>
<td>67.98</td>
<td>13.76</td>
<td>-0.355</td>
<td>0.267</td>
<td>-0.755</td>
<td>0.529</td>
</tr>
<tr>
<td>Goal Selection</td>
<td>70.03</td>
<td>11.34</td>
<td>-0.402</td>
<td>0.267</td>
<td>-0.355</td>
<td>0.529</td>
</tr>
<tr>
<td><strong>CMI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Maturity</td>
<td>18.30</td>
<td>2.73</td>
<td>-0.680</td>
<td>0.267</td>
<td>0.334</td>
<td>0.529</td>
</tr>
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</table>

Table 3: Means, Standard Deviations, Skew and Kurtosis for subscales on the Life Transitions Inventory for Athletes (LTIA), Career Decision Making Self-Efficacy Scale (CDMSE), and the Career Maturity Inventory (CMI) for all subjects in the study.
The data are represented in a chronological fashion beginning with the first observation (Autumn Quarter 1997 posttest) tested with the second observation (Winter Quarter 1998 pretest). Table 4 illustrates the z scores, means, standard deviations, and correlation coefficients when the Autumn Quarter posttest scores were compared with the Winter Quarter pretest scores. The purpose of this test was to address the internal validity threats of history, testing, instrumentation, and the external validity threats of the interaction of testing and X, and reactive arrangements (Campbell & Stanley, 1963). All scores collected from the Autumn Quarter posttest group changed in the anticipated direction mentioned earlier in Table 2, although none of the Mann Whitney U tests revealed statistical significance. This finding may indicate that the groups differed but the difference was too small to be statistically significant. For the LTIA, the largest difference between the Autumn posttest and Winter pretest groups was found on the Achievement Satisfaction subscale (M Autumn post=32.81, M Winter pre=36.92). Two other subscales, Athletic Identity and Role Confusion, showed slightly smaller differences (AI M Autumn post=30.36, M Winter pre=33.71; and RC M Autumn post=30.00, M Winter pre=33.57 respectively). The smallest difference found on the LTIA was that of Future Planning, where the Autumn and Winter Quarter groups had almost equal scores (M Autumn post=38.90, M Winter pre=38.64).

As for the CDMSE, findings revealed that the largest differences between the groups were found on the subscales Problem Solving (M Autumn post=66.81, M Winter pre=61.57), Occupational Information (M Autumn post=68.18, M Winter pre=63.50), and Goal Selection (M Autumn post=72.72, M Winter pre=67.21). The smallest findings were
Self Appraisal (M Autumn post=71.18, M Winter pre=70.67) and Planning (M Autumn post=69.63, M Winter pre=66.42). Finally, scores on the Career Maturity Inventory also show a difference between the groups, although this difference is very small (M Autumn post=18.27, M Winter pre=17.64). Point biserial correlation coefficients revealed small to medium effect sizes, with the two greatest being Role Conflict (r=-.263) and Goal Selection (r=.243), and the lowest being Self-Appraisal (r=.046) and Future Planning (r=.024).
<table>
<thead>
<tr>
<th>Variable</th>
<th>AU QTR 1997 Posttest (n=11)</th>
<th>WI QTR 1998 Pretest (n=14)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>z</td>
</tr>
<tr>
<td>LTIA (z critical=2.50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Satisfaction</td>
<td>32.81</td>
<td>8.64</td>
<td>36.92</td>
<td>10.90</td>
<td>-1.34</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>30.36</td>
<td>7.32</td>
<td>33.71</td>
<td>7.90</td>
<td>-0.93</td>
</tr>
<tr>
<td>Future Planning</td>
<td>38.90</td>
<td>5.83</td>
<td>38.64</td>
<td>5.49</td>
<td>-0.60</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>30.00</td>
<td>5.96</td>
<td>33.57</td>
<td>7.36</td>
<td>-1.24</td>
</tr>
<tr>
<td>CDMSE (z critical=2.58)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Appraisal</td>
<td>71.18</td>
<td>14.83</td>
<td>70.07</td>
<td>10.13</td>
<td>-.794</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>66.81</td>
<td>18.29</td>
<td>61.57</td>
<td>11.81</td>
<td>-1.51</td>
</tr>
<tr>
<td>Planning</td>
<td>69.63</td>
<td>14.73</td>
<td>66.42</td>
<td>13.31</td>
<td>-0.52</td>
</tr>
<tr>
<td>Occupational Information</td>
<td>68.18</td>
<td>17.0</td>
<td>63.50</td>
<td>13.83</td>
<td>-1.15</td>
</tr>
<tr>
<td>Goal Selection</td>
<td>72.72</td>
<td>11.26</td>
<td>67.21</td>
<td>11.44</td>
<td>-1.45</td>
</tr>
<tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>Career Maturity</td>
<td>18.27</td>
<td>2.24</td>
<td>17.64</td>
<td>2.92</td>
<td>-0.33</td>
</tr>
</tbody>
</table>

a: point bi-normal
Note: All tests run with assumption of equal variance
*p < .05 for a single test, two-tailed

Table 4: Means, Standard Deviations, Mann Whitney U test and effect sizes for differences between Autumn Quarter 1997 (posttest) and Winter Quarter 1998 (pretest) scores on Life Transitions Inventory for Athletes (LTIA), Career Decision Making Self-Efficacy (SCMSE), and Career Maturity Inventory (CMI) Subscales.
Table 5 shows the differences between Winter Quarter pretest and posttest scores using a Mann Whitney U test. The purpose of this test was to address the internal validity threats of selection and mortality, and the external validity threats of reactive arrangements (Campbell & Stanley, 1963). No statistical significance was found on the subscales, but all subscales changed in the anticipated direction. If the tests would have revealed statistical significance, the within group comparison would have allowed for a high degree of confidence that the changes in scores were not due to selection and mortality and reactive arrangements. Changes on the LTIA subscales were all quite similar, Achievement Satisfaction (M Winter pre=36.92, M Winter post=34.78), Athletic Identity (M Winter pre=33.71, M Winter post=31.21), Future Planning (M Winter pre=38.64, M Winter post=40.57), and Role Confusion (M Winter pre=33.57, M Winter post=31.50).

The scores on the CDMSE revealed three fairly large differences, although none statistically significant, on the subscales Problem Solving (M Winter pre=61.57, M Winter post=72.35), Planning (M Winter pre=66.42, M Winter post=78.78), and Occupational Information (M Winter pre=63.50, M Winter post=75.21). These findings show that at the end of the course students demonstrated more confidence with respect to dealing with their problems, planning for their future, and acquiring and using occupational information than they did at the beginning. Smaller differences were observed for the subscales of Self Appraisal (M Winter pre=71.18, M Winter post=76.64) and Goal Selection (M Winter pre=72.72, M Winter post=75.92). A small, positive change also was found in Career Maturity scores (M Winter pre=18.27, M Winter post=19.07), but this difference
was not large enough to be statistically significant. Point biserial correlation coefficients found several relatively high effect sizes, including Problem Solving ($r = -.467$), Planning ($r = -.473$), and Occupational Information ($r = -.422$). The lowest effect sizes were Achievement Satisfaction ($r = .105$) and Role Conflict ($r = .134$). Overall, nearly all subscales on the CDMSE had medium to fairly high effect sizes with the range being from $-.331$ (Self Appraisal) to $-.473$ (Planning). All effect sizes for the LTIA were under $.190$, and the effect size for the CMI was $-.270$. 
<table>
<thead>
<tr>
<th>Variable</th>
<th>WI QTR 1998 Pretest (n=14)</th>
<th>WI QTR 98 Posttest (n=14)</th>
<th>z</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>LTIA (z critical=2.50)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Satisfaction</td>
<td>36.92</td>
<td>10.90</td>
<td>34.78</td>
<td>10.24</td>
</tr>
<tr>
<td>Athletic Identity</td>
<td>33.71</td>
<td>7.90</td>
<td>31.21</td>
<td>8.98</td>
</tr>
<tr>
<td>Future Planning</td>
<td>38.64</td>
<td>5.49</td>
<td>40.57</td>
<td>4.89</td>
</tr>
<tr>
<td>Role Conflict</td>
<td>33.57</td>
<td>7.36</td>
<td>31.50</td>
<td>8.52</td>
</tr>
<tr>
<td>CDMSE (z critical=2.58)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Appraisal</td>
<td>70.07</td>
<td>10.13</td>
<td>76.64</td>
<td>14.83</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>61.57</td>
<td>11.81</td>
<td>72.35</td>
<td>9.21</td>
</tr>
<tr>
<td>Planning</td>
<td>66.42</td>
<td>13.31</td>
<td>78.78</td>
<td>10.36</td>
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<tr>
<td>Occupational Information</td>
<td>63.50</td>
<td>13.83</td>
<td>75.21</td>
<td>12.22</td>
</tr>
<tr>
<td>Goal Selection</td>
<td>67.21</td>
<td>11.44</td>
<td>75.92</td>
<td>11.57</td>
</tr>
<tr>
<td>CMI (z critical=1.96)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Maturity</td>
<td>17.64</td>
<td>2.92</td>
<td>19.07</td>
<td>2.33</td>
</tr>
</tbody>
</table>

a: point bi-serial
Note: All tests run with assumption of equal variance
* p<.05 for a single test, two-tailed

Table 5: Means, Standard Deviations, Mann Whitney U test and effect sizes for
differences between Winter Quarter 1998 (pretest) and Winter Quarter 1998 (posttest)
scores on Life Transitions Inventory for Athletes (LTIA), Career Decision Making
Self-Efficacy (SCMSE), and Career Maturity Inventory (CMI) Subscales.
The analysis between the Winter Quarter posttest group and the control group (subjects who did not receive the intervention program) is illustrated in Table 6. The purpose of this test was to address the internal validity threats of history, testing, and instrumentation, and the external validity threats of the interaction of testing and X, and reactive arrangements (Campbell & Stanley, 1963). Once again, score differences on all three instruments were in the anticipated direction. The results on the LTIA show that the Winter group, after receiving the intervention course, had lower scores on Achievement Satisfaction (M Winter post=34.78, M Control= 38.02), Athletic Identity (M Winter post=31.21, M Control= 34.42), and Role Confusion (M Winter post=31.50, M Control= 35.42). In addition, the Future Planning scores of the Winter Quarter group were higher than those of the control group (M Winter post=40.57, M Control= 38.78).

Statistical significance was found on the Planning subscale (M Winter post=78.78, M Control= 67.76) on the CDMSE, and several other subscales revealed differences in mean scores: Problem Solving (M Winter post=72.35, M Control= 65.11), Occupational Information (M Winter post=75.21, M Control= 67.02), and Goal Selection (M Winter post=75.92, M Control= 68.30). The scores on the Self Appraisal scale also changed slightly (M Winter post=76.64, M Control= 70.07). These scores suggest that the course increased the confidence of the student athletes, although the difference was not statistically significant. Had statistical significance been found on any of the variables, the differences in these scores could not be accounted for by the internal threats to validity such as history, testing, instrumentation, and external threats to validity such as reactive arrangements. Career Maturity scores were also higher for the Winter Quarter group,
although they were not statistically significant (M Winter post=19.07, M Control=18.28). Effect sizes were greatest for Planning (r=.399), Goal Selection (r=.292), Occupational Information (r=.273), Problem Solving (r=.269), and Self-Appraisal (r=.256) as measured by point biserial correlation coefficient.
<table>
<thead>
<tr>
<th>Variable</th>
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<th>CONTROL (n=42)</th>
<th>z</th>
<th>r²</th>
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<tr>
<td></td>
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<td>M SD</td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
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</tr>
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<td></td>
<td></td>
</tr>
<tr>
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</tr>
<tr>
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<td>67.76 11.42</td>
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<td></td>
</tr>
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<td>18.28 2.92</td>
<td>-0.829</td>
<td>0.123</td>
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</table>

a: point bi-serial
Note: All tests run with assumption of equal variance
*p<.05 for a single test, two-tailed

Table 6: Means, Standard Deviations, Mann Whitney U test and effect sizes for differences between Winter Quarter 1998 (posttest) and Control group subjects’ scores on Life Transitions Inventory for Athletes (LTIA), Career Decision Making Self-Efficacy (SCMSE), and Career Maturity Inventory (CMI) Subscales.
Two additional analyses were conducted to test for maturation effects. If maturation had no effect on subscale scores, one would expect no statistically significant differences between Observation 1 (Autumn Posttest, administered in December, 1997) and Observation 3 (Winter Posttest, administered in March, 1998), and between Observation 2 (Winter pretest, administered in January, 1998) and Observation 4 (Control group, administered in March, 1998). As was expected, no statistical significance were found on any of the tests. Table 7 illustrates the comparison between the Autumn posttest group and the Winter pretest group, and Table 8 shows the results between the Winter pretest group and the control group. Thus, the results of these two sets of tests suggest that maturation had a trivial impact on the results of this study. The greatest effect size in these two tests was found between the Autumn Quarter posttest and Winter Quarter posttest on the Planning subscale ($r = -0.355$) of the CDMSE, while there was little difference between the two groups on the subscales of the LTIA and the CMI.
<table>
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<td>M</td>
<td>SD</td>
</tr>
<tr>
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<td>8.98</td>
</tr>
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<td><strong>CMI (z critical=1.96)</strong></td>
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<tr>
<td>Career Maturity</td>
<td>18.27</td>
<td>2.24</td>
<td>19.07</td>
<td>2.33</td>
</tr>
</tbody>
</table>

a: point bi-serial
Note: All tests run with assumption of equal variance
*p<.05 for a single test, two-tailed

Table 7: Means, Standard Deviations, Mann Whitney U test and effect sizes for differences between Autumn Quarter 1997 (posttest) and Winter Quarter 1998 (posttest) scores on Life Transitions Inventory for Athletes (LTIA), Career Decision Making Self-Efficacy (SCMSE), and Career Maturity Inventory (CMI) Subscales.
<table>
<thead>
<tr>
<th>Variable</th>
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<th>CONTROL (n=42)</th>
<th>z</th>
<th>r'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>LTIA (z critical=2.50)</td>
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<td></td>
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</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
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<td>Athletic Identity</td>
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</tr>
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<tr>
<td>CMI (z critical=1.96)</td>
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<tr>
<td>Career Maturity</td>
<td>18.27</td>
<td>2.24</td>
<td>18.28</td>
<td>2.92</td>
</tr>
</tbody>
</table>

Note: All tests run with assumption of equal variance
*p<.05 for a test, two-tailed

Table 8: Means, Standard Deviations, Mann Whitney U test and effect sizes for differences between Winter Quarter 1998 (pretest) and Control group subjects’ scores on Life Transitions Inventory for Athletes (LTIA), Career Decision Making Self-Efficacy (SCMSE), and Career Maturity Inventory (CMI) Subscales.
In order to examine the relationship between the subscale variables, an intercorrelation matrix is displayed on Table 9. All subscales on the CDMSE are highly correlated amongst themselves, with each correlation significant at p<.01. The strongest correlations were between Goal Selection and Self Appraisal (.83); Planning and Self Appraisal (.82), Occupational Information and Planning (.81); Planning and Problem Solving (.80); Goal Selection and Problem Solving (.79); and Goal Selection and Planning (.78). The subscales of the LTIA were not as highly correlated amongst one another as the CDMSE, although Achievement Satisfaction and Athletic Identity (.67) and Role Conflict (.54) were significant at p<.01, as well as Athletic Identity and Role Conflict (.65). The Future Planning subscale was highly correlated with all subscales on the CDMSE and the Self Appraisal subscale of the LTIA. Career Maturity was moderately correlated with all subscales from the LTIA and CDMSE.
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<th>Subscale</th>
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<th>Athld</th>
<th>FutPlan</th>
<th>RoleCon</th>
<th>SelfAp</th>
<th>ProbSol</th>
<th>Plan</th>
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<td>SelfAp</td>
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<td>Plan</td>
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<td>CarMat</td>
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<td>.36**</td>
<td>.38**</td>
<td>.48**</td>
<td>.43**</td>
<td>.38**</td>
</tr>
</tbody>
</table>

*p<.05; **p<.01

Table 9: Intercorrelations among Career Maturity (CMI), Career Decision Making Self Efficacy (CDMSE), and Readiness to Retire(LTIA) subscales.

Summary

Although the results of this study found little statistical significance amongst the variables tested, all the variables did change in the anticipated directions and several moderate to large effect sizes were discovered. By examining each test run in this study, almost all internal and external threats to validity would have been accounted for had there been statistical significance, which would have supported the notion that the differences found were probably not due to threats to validity.

Since the sample size was small and some distributions were not symmetrical, a Mann Whitney U test was used to look for differences between the groups. Although only
one subscale was found to be statistically significant (Planning), effect sizes for many of
the tests revealed high effect sizes, particularly for subscales on the CDMSE. Two tests
were run to check for maturation effects and revealed no statistical significance.
CHAPTER 5

DISCUSSION

Purpose of the Study

The purpose of this study was to determine the relationship between student athletes' participation in a career assistance intervention program (Positive Transitions for Student Athletes) based on reality therapy (Bartolini, 1994) and student athletes' career maturity, readiness to retire, and career decision making self-efficacy scores. Transitions in life are common to all people, and researchers have studied the factors that mediate the nature of a transition for some time now (Schlossberg, 1981; Hopson & Adams, 1977). Most people when asked about transitions in their life will refer to events like high school graduation, getting married, or starting a new career. One particular type of transition that is often overlooked is the inevitable retirement from elite sport participation. For some athletes, the sport retirement transition is effortless and pain-free and is even welcomed (Thomas & Ermler, 1988). However, recent studies have suggested that for a large number of athletes the retirement experience is an incredibly painful process filled with grief, self-doubt, and a sense of loss (Blinde & Stratta, 1992; Gordon, 1988; Ogilvie & Howe, 1986; Parker, 1994; Murphy, Petitpas, & Brewer, 1996).
Student athletes are a unique sub-population that are often overlooked when they are faced with the transition of retiring from sport. Rhatigan (1984) has identified several reasons why student athletes are identified as unique when compared with non-athletes, including an extensive travel schedule, different academic requirements, emotional pressures attached to competition, and, for most athletes, a year round season of training. Add to this unique lifestyle the fact that only 1% of all student athletes will play at a level higher than collegiate athletics (Figler & Figler, 1984), researchers have begun to investigate the issues related to sport retirement.

This study attempted to build from previous literature and introduce an intervention program designed to assist student athletes through the sport retirement transition. Researchers have done an adequate job of identifying and describing the sport retirement transition, but few have empirically tested the merit of an intervention program. The program tested in this study (Positive Transitions for Student Athletes), is grounded within the framework of Reality Therapy (Glasser, 1965) and has been used at The Ohio State University since 1996. All fourth and fifth year student athletes were eligible to enroll in this quarter long course and all subjects who participated in the study signed a waiver. Student athletes were tested on the variables found in previous research to be associated with problematic sport retirement transitions, including career maturity (Kennedy & Dimick, 1987), self-efficacy (Taylor & Shore, 1994), and athletic identity, role conflict, and achievement satisfaction (Lantz, 1994). The research questions answered in this study are the following:
Research Questions

1. What are the demographic characteristics of the student athletes enrolled in a career assistance course at a large midwestern university (gender, race, grade point average, scholarship status, and type of sport played)?

2. Does career maturity (as measured by the Career Maturity Inventory, Crites, 1978) of student athletes attending a career assistance course differ from a control group?

3. Does readiness to retire (as measured by the Life Transitions Inventory for Athletes, Lantz, 1995, using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?

4. Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale, Taylor & Betz, 1994) of student athletes attending a career assistance course differ from a control group?

Data Sample

The total overall number of student athletes that were eligible to have enrolled in the intervention program during the 1997-98 academic year was 189. Of this total, 67 (35%) students volunteered to participate in the study, either by enrolling in the course or by participation as a control subject who either chose not to take the course or enrolled at a later date in the school year. The demographic data of the subjects used in the study, as supplied by the compliance department within the athletic department, closely resembled the overall demographic data on the variables of race, scholarship status, grade point average, type of sport played, and gender. Preferably, all student athletes would have
been required to enroll in the exiting sport retirement course which would have allowed
the researcher greater generalizability and statistical power, but the sample used in this
study did resemble the overall group on the variables measured.

Research Question Findings

Research Question # 1: What are the demographic characteristics of the student
athletes enrolled in a career assistance course at a large midwestern university (gender,
race, grade point average, scholarship status, and type of sport played)?

The sample of student athletes used in this study closely resembled sample frame
of the overall population of all 4th and 5th year student athletes attending school at this
university. Of the 189 potential subjects eligible to participate in the study, 67 students
were tested as part of the treatment or control groups. The majority of the overall
population was white (78%), received a full or partial scholarship (75%), had a grade
point average of at least 2.5 (71%), participated in a non-revenue sport (80%), and a little
more than half were male (57%). The three groups of subjects used in the study (Autumn
Quarter 1997, Winter Quarter 1998, and the Control Group) when examined collectively,
closely matched the figures of the overall group of 4th and 5th year student athletes at this
university. When the groups are examined independent of one another, the Autumn
Quarter group is shown to be very different than the overall 4th and 5th year population on
the several variables, most notably gender.

Research Question # 2: Does career maturity (as measured by the Career Maturity
Inventory) of student athletes attending a career assistance course differ from a control
group?
The first dependent variable measured in this study was level of career maturity. The Career Maturity Inventory (Crites, 1978) was used to measure how mature an individual is at making career decisions. Although none of the Mann Whitney U tests were statistically significant, the career maturity scores did increase after the completion of the intervention program. Perhaps the most interesting finding was that of the Winter Quarter group, which was the only group to have been pre and posttested. This group had a mean score of 18.27 at the beginning of the course, and 10 weeks later had an overall mean score of 19.07. Although the intervention program may be the reason for increased scores on career maturity, the effects of testing cannot be ruled out. The point biserial correlation coefficient effect size for this pre and posttest comparison was a moderate .270.

Because student athletes were not tested against non-athletes, it is impossible to tell from the results of this study whether or not student athletes are similar to the general student population in career maturity. Several tests were run to account for the other threats to internal and external validity. Had any of the tests revealed statistical significance, the differences in the tests would not have been accounted for by threats to validity. Two tests were run to rule out the effect of maturation and neither revealed any statistical significance.

Research Question # 3: Does readiness to retire (as measured by the Life Transitions Inventory for Athletes using four subscales: athletic identity, role conflict, future planning, and achievement satisfaction) of student athletes attending a career assistance course differ from a control group?
The second dependent variable tested in this study was readiness to retire, as measured by the Life Transitions Inventory for Athletes (Lantz, 1995). The instrument has four subscales: Athletic Identity, Role Conflict, Achievement Satisfaction, and Future Planning. Again, no statistical significance was found but all scores on the subscales did change in the anticipated direction. The small number of subjects used in the study may have contributed to this lack of statistical significance, but some of the variables may have been resistant to change due to the nature of the variable. For instance, an athletic identity is not something an athlete acquires overnight, but over a lifetime of playing sports. An intervention program that meets 10 times over a 3 month span may not be enough of an intervention to eliminate this counterproductive way of viewing oneself.

Once again all the subscales changed in a positive direction. In all cases, scores on athletic identity were consistent with the hypotheses. Mean scores for the Autumn and Winter Quarter posttest groups were lower than the Control group scores, and the Winter Quarter group mean scores dropped when compared to their pre test scores 10 weeks earlier. Having an exclusive athletic identity has been associated with being "unidimensional," and can be counterproductive to an athlete faced with sport retirement and forced to look into another career, paradoxically, athletic identity may be advantageous when competing, as many of the students in this study still were (Ogilvie & Howe, 1982). Athletes who view themselves as only an athlete may be overly reliant on sport participation for their self-validation (Pearson & Petitpas, 1990) and may be subject
to an identity foreclosure status (Marcia, 1966) which occurs when a commitment to an occupation is made prematurely and without sufficient exploration of one’s needs or values.

Another reason why the scores on Athletic Identity may not have changed significantly may be due in part to the fact that many of the athletes who were tested in the study were still competing. In fact, two other scales may have been impacted by this as well (Role Conflict and Achievement Satisfaction). The Role Conflict subscale examined the delicate balance of time and commitment between the role of student and athlete. The Achievement Satisfaction subscale tests for the residual effect of “unfinished business,” or the dreams the athlete may have had while competing that were left unfulfilled. Coakley (1978) has suggested that athletes are separated from the rest of the student body, thus creating a frustrating conflict between their roles as students and athletes. The time requirements necessary for elite sport participation may lead athletes to a sheltered lifestyle and interacting only with fellow athletes. This role conflict may in fact perpetuate an athletic identity, unrealistic appraisals of professional opportunities, and the underdevelopment of career related exploration and training.

Achievement satisfaction is the degree to which individuals attain their self-imposed goals, and is based on the notion that considering the years of commitment reflected in the sport careers of collegiate athletes, playing up to one’s potential and realizing the best results of one’s investment may well have psychological effects extending beyond an athletes playing days (Buntrock, 1994). Schlossberg (1984), in her model on adaptation to transition, lists the variables characterizing the transition as the
first factor to examine. More specifically, she refers to the timing, trigger, source, and duration of a transition. An athlete who still has much to achieve in sports will more often than not be subject to a more difficult transition when faced with sport retirement. The timing (when the retirement occurs), trigger (how retirement occurs, most often deselection or injury), source (if not by an injury, typically the coach), and duration (typically permanent) all play a significant part in the amount of achievement satisfaction the athlete has yet live up to.

The three variables mentioned (Athletic Identity, Role Conflict, and Achievement Satisfaction) all changed in the desired direction in the results of this study. They may have changed even more had some of the subjects not still have been competing while enrolled in the course. It is quite difficult to change a persons athletic identity when they are preparing for a game the following weekend and their performance is crucial to the teams performance. Another implication that cannot be overlooked was the fact that many of the student athletes enrolled in the course had not yet given up on their aspirations to compete at the next higher level. For example, football players enrolled in the course had the April NFL draft to look forward to, and even the possibility of a free agency signing later if they were not picked in April. Other student athletes were still evaluating their options, including international professional leagues and Olympic participation. When to address the sport retirement transition is a major concern for researchers. If the training program is introduced too soon, scores on variables like the ones mentioned here may not significantly change- and if they do the researcher may be subject to ethical criticism that the program may decrease athletic preparation and
competition levels. If the training program is introduced after all professional options are explored (which may in some cases take years), valuable time may have been lost that could have been used to assist the athlete for the likely sport retirement transition. One possible way to address these concerns may be to introduce a sport retirement program early in the student athletes’ curriculum, and teach various career skills that are appropriate to the students’ developmental level. For instance, a course offered during the freshman year might introduce the concept of what a transferable skill is, while a senior year course might focus more on the impact of an exclusive athletic identity.

The fourth subscale tested on the LTIA is Future Planning, which may also have been impacted by the fact that most athletes in the study still had not ruled out competing at the next level. None of the tests run revealed statistical significance, although all groups did show improvement in this score as well. Mihovilovic (1968) found that athletes who had not planned for another career after sports encountered a more difficult transition. Haerle (1975) reported that professional baseball players who continued their educations or held meaningful jobs during the off season had better occupational adjustment after their playing days were over. The intervention course tested in this study forced student athletes to address major decisions in their life at this time, including athletics, and to write up future plans that may or may not include playing sports after college. Students were also given ideas on how to remain involved in sports even as they retire and pursue other non-sport occupations (recreational leagues and coaching youth sports are two examples).

Although no statistical significance was found on any of the LTIA subscales, several variables had small to moderate effect sizes that should be noted. When the
Autumn Quarter 1997 posttest was measured against the Winter Quarter 1998 pretest, three of the four variables had small to moderate effect sizes over .20 (Role Conflict $r=-.263$, Athletic Identity $r=-.221$, and Achievement Satisfaction $r=-.208$). These effect sizes were not as great when the Winter Quarter pre and posttest scores were tested, with only the Future Planning ($r=-.189$) and Athletic Identity ($r=.152$) subscales higher than .15. When the LTIA subscale effect sizes were observed in the Winter posttest-control group comparison, Role Conflict ($r=-.236$) and Athletic Identity ($r=-.160$) had small to moderate effect sizes. According to Cohen (1988), small, medium, and large effect sizes ($f$) are around .10, .30, and .50, respectively.

Research Question # 4: Does career decision making self-efficacy (as measured by The Career Decision Making Self-Efficacy Scale) of student athletes attending a career assistance course differ from a control group?

The third instrument used in the study was the Career Decision Making Self Efficacy Scale (Taylor & Betz, 1994). The CDMSE measures an individual's degree of belief that he or she can successfully complete tasks necessary to making career decisions. Here student athletes were examined with respect to their level of self-efficacy, or self-confidence, applied to five career related dimensions. The subscales were developed from the five Career Choice Competencies postulated in Crites (1978) model of career maturity and assessed in the Career Maturity Inventory (Crites, 1978). The subscales on the CDMSE are Self-Appraisal, Problem Solving, Planning, Occupational Information, and Goal Selection. The first subscale, Self-Appraisal, taps into how well a person is familiar with his or her abilities related to career development. The Occupational Information
subscales asks questions regarding career information and job descriptions. The Goal Selection subscale relates to the confidence one has setting goals, both career related and personal. Planning has to do with identifying both personal career goals that must be attended to as well as setting up appointments with people who work in a particular career. The Problem Solving subscale examines how much confidence a person has working out issues that may impede progress toward an ideal career goal, like moving to a new city and identifying resources. One of the subscales (Planning) revealed statistical significance. Although self-efficacy has been studied extensively in science for many years since Bandura introduced the concept (1982), researchers have not yet applied this construct to sport retirement. The scale used in this study (CDMSE) specifically tested confidence as applied to career development and future planning, precisely the goal of the intervention program.

Lent and Brown (1996) argue that self-efficacy beliefs are acquired and modified through four primary informational sources: (a) personal performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) physiological states and reactions. Of this list, the above authors contend that personal accomplishments are generally seen as exerting the most influence on self-efficacy. Hackett and Betz (1981) argued that low expectations of self-efficacy, with respect to many career areas, were a major mediator of gender differences in a vocational choice and later vocational behavior. The vast majority of student athletes cannot gain work experience because of their athletic schedule. One of the variables mentioned that may impact low self-efficacy levels of student athletes is the lack of having had a career-related personal performance accomplishment, which comes
from having had experience performing a task. If you have not had a “personal
performance accomplishment” by having had interview, internship, and job experience,
you might not have much confidence you could do so successfully. This was certainly the
case for most of the athletes enrolled in the intervention course, but another finding was
uncovered that was only present in dialogue in the course. In contradiction to most
student athletes having little self-confidence in career development outside of sports, a
small number of student athletes enrolled in the course expressed extreme confidence with
respect to career development outside of sports, often times noting that the athletic
experience had prepared them with the confidence that they could excel in any path they
chose. Some of this confidence did not equate to results they boasted they could achieve,
particularly when it was time to draft a resume or participate in an in-class mock
interview. This finding may encourage future researchers to explore the nature of self-
efficacy with athletes as it carries over into career development.

None of the subscales on the CDMSE revealed statistical significance except for
Planning, although effect sizes were moderate to high for almost every analysis. Across
every test, effect sizes for the CDMSE were consistently higher than effect sizes for the
LTIA and CMI. Although effect size was small for the subscale Self-Appraisal ($r=.046$),
small to moderate effect sizes were found on the remaining four variables (Problem
Solving $r=.178$, Planning $r=.118$, Occupational Information $r=.156$, and Goal Selection
$r=.243$) when the Autumn Quarter 1997 posttest group was compared against the Winter
Quarter 1998 pretest group. The most impressive findings for effect size were when the
Winter Quarter 1998 pretest was measured against the Winter Quarter 1998 posttest. All
five subscales had effect sizes over .331, with the largest being .473 (Planning). Similar results, but not as strong, were found when the Winter Quarter posttest scores were tested against the control group. All five subscales had effect sizes over .256, with the greatest effect size Planning (r=.399).

The high effect sizes found on the CDMSE may be in part due to the intervention course. Throughout the ten weeks, students were given several outside readings and assignments that were designed to broaden their identity outside of the athletic domain and increase their confidence as people. In class, many lectures and discussions were centered around life goals that were not related to sport aspirations and instead focused on how the athletes can use their athletic experience as an advantage when seeking employment. For example, one lesson plan included the brainstorming of a list of transferable skills and attributes that can be shifted from the sports arena to new non-sport careers. Many persons, athletes included, often times do not give themselves credit for things like setting and achieving goals, discipline, leadership and communicating with team members who they do not always like. These are the same things needed when one applies for work outside of sports. Athletes have so many of the skills and attributes that they use everyday that they tend to forget or devalue their importance. It was clear by the findings in this study that student athletes who enrolled in the program had significantly higher scores of confidence with respect to career development.

Conclusions

It has been relatively well established by this and previous research that the experiences of a collegiate student athlete is much different than a non-athlete attending
college. Even the athletes that agree that they will probably not go into sports past the collegiate level are still left at a disadvantage when competing for internships and jobs against students with more work experience.

Sport retirement programs must be seriously considered by athletic departments around the country. Student athletes are at risk for serious problems that can occur when they do not prepare for their future. The effect size findings in this study, particularly on the CDMSE, imply that an intervention program does make a difference helping student athletes gain confidence when faced with the sport retirement transition and pursue non-sport careers. Perhaps a program that meets more than once a week is needed, and maybe it should be introduced earlier than the senior year. And although statistical significance was not found on every measure in this study, all the scales changed in the expected direction. These findings might be enhanced by mandating a course like this to all student athletes before they leave college. Even for the rare athlete who is good enough to make it to the professional level, he or she will still need to learn how to interview with employers, communicate effectively to the organization, learn how to address major decisions in life, and set goals that are realistic and achievable. Getting student athletes to volunteer for a course of this nature is sometimes difficult because they often feel as though this is their final good-bye. Athletic departments must make it a point to explain the value of a program like this to all athletes, even the ones who go on to the next level.

Limitations

As with any research study, there are limitations to this study that should be mentioned. The first two issues are that of sample size and self-selection. For this study,
25 students enrolled in the course over a 2 quarter period. Another 42 students signed up as control subjects. That meant over one hundred students were not involved in the study. This is an issue that can be addressed in several ways, the most obvious being a mandated exiting course for senior level student athletes. Since the subjects were able to choose whether they wanted to enroll in the course, the subjects who participated in the study may not actually reflect the overall population of 4th and 5th year student athletes. It is suspected that greater numbers of student athletes will enroll in a course of this nature now that there is a greater interest in this area, for both researchers and practitioners. Longitudinal data collection of the subjects used in this study would also add to the findings.

Another issue that should be addressed in future studies is that of instrumentation, particularly since this course is not standardized. This study may be hard to replicate, since the intervention used in this study is not available to colleges yet and any measure of a course not exactly designed as this one could lead to erroneous conclusions. Finally, although measures were taken to account for threats to internal and external validity such as history, maturation, and the interaction of testing, the changes in these data could still reflect nothing more than that. Student athletes would have had to face this transition with or without an intervention program, and perhaps they would have changed their thinking accordingly.

The findings in this study should generalized to other 4th and 5th year student athletes at Division I schools, at best. More than likely, student athletes competing at Division II and III schools are more realistic with their potential of advancing to the
professional level, and therefore are more prepared to move on after their playing days are over. Caution should be taken even when comparing these results to other Division I schools, for not all schools emphasize and endorse athletics in the same way as this institution does.

Recommendations for Future Research

The subject of sport retirement being problematic to athletes is one of growing debate, and researchers are beginning to study the factors influencing a positive transition from sports. Courses like the one tested here will probably be offered at universities around the country in a few years. The most accurate results will come with data accumulated over a period of years that will allow for greater reliability. Until then, having a course required for athletes to take before they exit college will not only provide much needed empirical data, but also will prepare student athletes for a future that will probably be quite different than the lifestyle they had been previously leading. Obviously, students will benefit the most from programs like this, but athletic departments will as well. From the department’s perspective, students will now be able to voice some of their concerns with the current collegiate athletic structure, and may lend advice to where the real issues are. Are coaches responsible for leaving athletes unprepared? Coaches receive contract extensions and pay increases by filling seats and winning games, rarely for grade point averages and graduation rates. With this in mind, are some coaches caught up with their own agenda that they overlook the important developmental issues of the student athlete that do not include sports?
Just as much of a value to students and administrators is a course like this, parents also should be interested and concerned with the findings of this research. Parents also need to know the reality that the success rate of an athlete going to the professional level is not more than one percent. Parents might welcome programs like this one that encourage athletes to prepare for a future that they have more control over. A program like this may be a tough sell at first because nobody wants to talk about the ugly truth that so few athletes go on. If a program cannot be mandatory, then the athletic personnel offering a course like this must actually “sell” the program to the students. Having former athletes come back and talk about their experiences help, as do testimonials from the student athletes who finish the course.

There is still much to be learned with respect to things like gender, race, and sport differences. Continued research will enable confident conclusions about who exactly are the athletes most at-risk. More research needs to be done at the Division II and III levels as well. Does the exclusive athletic identity permeate to the smaller schools, where the odds are even greater that an athlete will not go on to the professional level? Do student athletes from smaller schools have the same transition issues as students from Division I schools? Has the demanding schedule of a Division I athletics with respect to training and traveling gotten to be a problem that administrators need to pull back some?

The next wave of studies should more closely examine the athletic identity issue, how much is enough? Perhaps data collected from professional athletes would help with this analysis. Professional athletes who admit to having a well-rounded lifestyle can possibly dispel the myth that an exclusive athletic identity is necessary for a career in
professional sports. Can you be a well-rounded person and still compete at the top level? Do many athletes have such great confidence on the court or field that they feel like the transition into a non-sport career is much easier and less concerning than putting out great effort to succeed in sports? Do some athletes take career preparation too lightly because of their athletic confidence? Would a longer program while in college be more beneficial? Perhaps a two-part program, one offered during the junior year and the other during the senior year. Data should be collected on the impact of social support. The course that was researched for this study has its entire structure of the course grounded on the importance of social support. Students were constantly required to work together, both in class and with outside assignments.

Researchers should also look at how the athlete retired, and what impact that has on the overall transition. For instance, an injury that forces retirement is obviously unplanned. Schlossberg's model might lead us to believe that the timing of this transition would have an impact (probably negative), in which it does. Are athletes who “freely” give up their dreams more likely to make positive transitions? How much impact does deselection have at the college level? Is it greatest at this point? Obviously, there is still much to be learned about the sport retirement transition. It is a serious subject matter that commands the attention of researchers now. With salaries in the millions and endorsement deals worth even more, the life of a professional athlete is appealing to many people. There is no indication that the money will go away anytime soon, in fact, it is projected to
go even higher. Most student athletes know this as well. The time is now to preach the
reality, and help student athletes out before they throw all their time and energy into
something that probably more unlikely than anything they will attempt to do in their lives.
LIST OF REFERENCES


Lewis-Griffith, L. (1982). Athletic injuries can be a pain in the head. Women’s Sports, 4, 44.


APPENDIX

POSITIVE TRANSITIONS WEEKLY CURRICULUM
CLASS SESSION: 1
TOPIC: Introduction to Positive Transitions

FLOW CHART: 60 minutes lecture, 30 minutes class activities

LECTURE: Introduction to the course, history, etc. Pass out syllabus, introduction of class members and instructors. Ground rules (confidentiality, on time, respect for others views, risk taking). Lecture on transitions, sport retirement transition, sport retirement theories. (60 minutes).

IN CLASS EXERCISES: Fill out demographic sheet, waiver sheet for study, sport profile sheet. “What makes you unique as a student-athlete?” exercise. (30 minutes)

HOMEWORK ASSIGNED: Reading assignments for the quarter, buy course book, return finished demographic sheet, waiver, and sport profile sheet.

HOMEWORK COLLECTED: None

OBJECTIVES: At the end of the session, the student will be able to:
- Summarize the syllabus and structure of the course
- Recognize the similarities of other student athletes going through the sport retirement transition.
- Distinguish transitions and sport retirement literature.
- Discuss the uniqueness of a student-athlete.
CLASS SESSION: 2
TOPIC: Identity Development (I)

FLOW CHART: 10 minutes administrative, clean up, collect outstanding assignments; 30 minutes class lecture, 60 minutes class exercises.

LECTURE: Sport identity, role foreclosure, odds against making it to the pros, transferable skills and attributes from sports (30 minutes).

IN CLASS EXERCISES: (1) Open-ended identity questions (ex., When I see my old locker, I feel...), (2) Transferable skills and attributes (motivation, discipline, ability to set goals, etc.), (3) Wants & Needs (sport, personal, and career). (60 minutes).

HOMEWORK ASSIGNED: Goals Auction & Who Am I?

HOMEWORK COLLECTED: Demographic sheet, waiver, sport profile sheet.

OBJECTIVES: At the end of the session, the student will be able to:
- Define sport identity, role foreclosure, and transferable skills and attributes from sports.
- Assess his or her own identity today.
- Identify his or her own transferable skills and attributes from sport.
- Distinguish his or her own wants and needs concerning sports, personal, and career
Positive Transitions Instructors Manual

CLASS SESSION: 3  
TOPIC: Identity Development (II)

FLOW CHART: 10 minutes administrative, clean up; 30 minutes lecture, 60 minutes class exercises.

LECTURE: Process HW from last week (Goals Auction and Who Am I?). (30 minutes)

IN CLASS EXERCISES: (1) Prioritization Grid (list current priorities); (2) Issues/Problems associated with sport retirement (On Board; list issue, positive or negative implications, and what can be done). (60 minutes)

HOMEWORK ASSIGNED: Complete weekly evaluations from workbook at the end of Identity section.

HOMEWORK COLLECTED: Goals Auction, Who Am I?

OBJECTIVES: At the end of the session, the student will be able to:
- Summarize the priorities in his or her life at this time
- Assess his or her values
- Formulate a picture of the role athletics will play in his or her future.
- Identify the issues associated with sport retirement.
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CLASS SESSION: 4
TOPIC:  Goal Setting

FLOW CHART:  10 minutes administrative and clean up; 45 minute lecture, 45 minutes class exercises.

LECTURE:  Start with brainstorming of current goals, then critique each individually. Go over goal setting tips, 3 types of goals (academic, personal, and career), and goal setting checklist (specific, realistic, believable, etc.). (45 minutes).

IN CLASS EXERCISES:  (1) Brainstorming Goals exercise. (45 minutes).

HOMEWORK ASSIGNED:  Short term goals (3 goals to be set for the next month), weekly feedback sheets on goal setting.

HOMEWORK COLLECTED:  Weekly evaluation sheets from Identity

OBJECTIVES:  At the end of the session, the student will be able to:
- Demonstrate effective goal setting strategies
- Identify the different types of goals
- Formulate his or her own life goals
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**CLASS SESSION:** 5  
**TOPIC:** Decision Making

**FLOW CHART:** 10 minutes administrative and clean up, 45 minutes lecture, 45 minutes class exercises.

**LECTURE:** Decision making model (The Planful Process). (15 minutes).

**IN CLASS EXERCISES:** (1) List major decisions of students on board and brainstorm solutions (60 minutes)

**HOMEWORK ASSIGNED:** Decision making exercise (pick one major life decision and apply the model in coming up with a possible solution)

**HOMEWORK COLLECTED:** Reaction papers on sport retirement readings assigned from week 1, feedback sheets from goal setting, short term goal exercise.

**OBJECTIVES:** At the end of the session, the student will be able to:
- Summarize a decision making model
- Recognize personal decisions at this time.
- Practice decision making by brainstorming solutions for themselves and other classmates
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CLASS SESSION: 6
TOPIC: Communication Skills

FLOW CHART: 15 minutes administrative and clean up, reactions from readings, 30 minutes lecture, 60 minutes in class exercises.

LECTURE: Communication lecture (keys to effective communication). Tips to effective communication handout. (20 minutes)

IN CLASS EXERCISES: (1) Dyad role plays of coach-player, employee-employer, etc. (2) Poor communication dyads (each person role plays poor communication and the group critiques). (60 minutes)

HOMEWORK ASSIGNED: Feedback sheets from Communication section, Communication Blocks (list people you currently want to communicate with better and your plans to do so).

HOMEWORK COLLECTED: Reaction Papers, DM feedback sheets.

OBJECTIVES: At the end of the session, the student will be able to:
- Review communication skills, verbal and non-verbal.
- Recognize the importance of assertiveness.
- Identify people in your life you need to communicate better with.
- Judge how poor communication skills affect you.
CLASS SESSION: 7
TOPIC: Career Skills (I)

FLOW CHART: 30 minutes administrative and clean up, group go-around up to date, 30 minutes lecture, 30 minutes class exercises.

LECTURE: The career development process, SIGI & Discover, Discuss what campus advising offices have to offer (30 minutes).

IN CLASS EXERCISES: (1) Career Beliefs (discuss myths and realities); (2) What I Am/ Am Not (explore careers). (30 minutes)

HOMEWORK ASSIGNED: 20 step career search (researching a particular career with an outline provided in class).

HOMEWORK COLLECTED: Who I am not communicating with; Feedback sheets from Communication.

OBJECTIVES: At the end of the session, the student will be able to:
- Analyze the career process
- Distinguish myths about finding a job/career.
- Recognize what SIGI/ Discover are and how they assist in career exploration.
- Identify where his or her advising office is located.
- Rank careers that he or she would like to pursue.
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CLASS SESSION: 8
TOPIC: Career Skills (II)

FLOW CHART: 15 minutes administrative and clean up, career workshop handouts, etc. 45 minutes lecture, 30 minutes class exercises.

LECTURE: Occupational Interviews (students will learn how to locate people in the community that can assist with career information); networking and OSU Buckswin. (An OSU networking data base for athletes).

IN CLASS EXERCISES: (1) Sell Yourself (Students must “interview” in class and are critiqued); (30 minutes).

HOMEWORK ASSIGNED: None, 20 step plan due next week

HOMEWORK COLLECTED: None

OBJECTIVES: At the end of the session, the student will be able to:
• Review occupational interviews.
• Review networking and the Buckswin program.
• Practice selling themselves by discussing their vocational strengths.
• Demonstrate his or her interview skills.
CLASS SESSION: 9
TOPIC: Career Skills (III)

FLOW CHART: 30 minutes on 20 step plan, clean up, handouts.

LECTURE: Job Interviews (what to say, wear, etc), Interview Sins (what not to do), Employee Contact Records (keeping records of contacts), Thank You’s (how to write them), Resume’s (how to construct one). (40 minutes).

IN CLASS EXERCISES: (1) Mock Interviews (40 minutes).

HOMEWORK ASSIGNED: None

HOMEWORK COLLECTED: 20 Step Career Search

OBJECTIVES: At the end of the session, the student will be able to:
- Examine job interviews and interview sins.
- Compare feedback on 20 step career search
- Review employee contact records, resumes, and thank you letters.
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CLASS SESSION: 10
TOPIC: Future Planning

FLOW CHART: 10 minutes clean up, administrative, 20 minutes lecture, 35 minutes in class exercises, 45 minutes wrap up.

LECTURE: Life Planning Discussion (20 minutes)

IN CLASS EXERCISES: Intention Statement (what you are going to pursue in life), (45 minutes).
***WRAP UP: Summarize your experience, testimonials, The Bottom Line Poem, Dissertation testing.

HOMEWORK ASSIGNED: None

HOMEWORK COLLECTED: None

OBJECTIVES: At the end of the session, the student will be able to:
• Summarize his or her major decisions and goals for the future.
• Summarize his or her experience in the class.