

Goal Setting in Competitive Sport: An Exploratory Investigation of Practices of Collegiate Athletes

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The purpose of the present investigation was to explore athletes' responses regarding the frequency, effectiveness, and importance of different types of goals to enhance their performance. Subjects ($N = 678$) were collegiate athletes at three NCAA Division I schools from different regions of the United States. Each athlete completed an extensive questionnaire detailing his or her perceptions regarding the use and effectiveness of a number of different goal-setting strategies. Descriptive results revealed that virtually all athletes practiced some type of goal setting to help enhance performance and that they found their goals to be moderately to highly effective. Athletes also reported that improving overall performance, winning, and having fun were their three most important goals. Many significant differences were found when comparing groups. For example, although females generally set more performance goals than males, males set more outcome goals than females. Future directions for research are offered including studying developmental differences and barriers/facilitators to achieving goals.

One of the most popular motivational techniques for enhancing performance and productivity in business, education, and sport is goal setting. The acceptance and use of goal setting in these fields has come in response to overwhelming evidence of enhanced motivation and performance found in the organizational and industrial literature. Much of this empirical research was undertaken to test the model of motivation based on conscious goals and intentions that appeared

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in Locke's (1968) seminal article. The most tested aspect of Locke's theory revolves around the relationship between goal specificity and performance. Several literature reviews and meta-analyses have strongly supported the contention that specific, challenging goals lead to higher levels of task performance than do-your-best goals or no goals (e.g., Locke, Shaw, Saari, & Latham, 1981; Tubbs, 1986; Wood, Mento, & Locke, 1987). And most recently, Locke and Latham (1990) reviewed 201 studies (over 40,000 subjects and 90 different tasks) examining this effect, finding that 183 studies (93%) supported Locke's initial hypothesis.

A second core aspect of Locke's goal-setting theory is that there is a linear relationship between the degree of goal difficulty and performance. The only exception occurs when subjects reach the limits of their ability at high goal-difficulty levels; in such cases, performance levels off or even decreases. Three separate meta-analyses have reviewed the empirical studies testing the goal difficulty-performance relationship (Chidester & Grigsby, 1984; Mento, Steel, & Karren, 1987; Tubbs, 1986). Results from these meta-analyses have revealed effect sizes ranging from .52 to .82. In addition, of the 192 studies reviewed, 175 (91%) provided support for harder goals producing higher levels of task performance than easy goals would.

Goal Setting in Sport and Exercise

Such consistent findings from the industrial and organizational literature have led many coaches, athletes, and physical educators to employ goal-setting techniques to improve physical performance. Unfortunately, empirical research in sport and exercise settings investigating the relationship between goals and performance was minimal before Locke and Latham (1985) offered several suggestions for applying goal setting to sports. In fact, Locke and Latham suggested that goal setting could work even better in sports than in organizations because the measurement of an individual's performance is typically easier in sports than in organizational settings.

With this impetus, since 1985 researchers in sport and exercise have focused predominantly on the areas of goal specificity, goal difficulty, and goal proximity. Unfortunately, despite the overwhelming support for the effectiveness of goal setting in organizational and industrial settings, the findings in sport and exercise settings have been equivocal. For example, in terms of goal specificity, no significant differences have been found between goal setting and control groups using sit-up performance (Weinberg, Bruya, & Jackson, 1985; Weinberg, Bruya, Jackson, & Garland, 1987), basketball shooting (Miller & McAuley, 1987; Weinberg, Fowler, Jackson, Bagnall, & Bruya, 1991), grip strength (Weinberg, Bruya, Garland, & Jackson, 1990), and circuit training (Hall, Weinberg, & Jackson, 1983). In contrast to these nonsignificant findings, several studies conducted in sport and exercise settings have found significant differences between specific-goal groups and do-your-best control groups. These include studies using such tasks as jumping (Erbaugh & Barnett, 1986), archery (Barnett & Stanicek, 1979), sit-ups (Tennenbaum, Weinberg, Pinchas, Elbaz, & Bar-Eli, 1991; Weinberg, Bruya, Longino, & Jackson, 1988), and grip endurance (Hall, Weinberg, & Jackson, 1987).

The areas of goal difficulty and goal proximity also are plagued with equivocal findings, or at least findings that are inconsistent with the organizational

literature. For example, one recommendation from Locke and Latham's (1985) article is that performers be encouraged to strive for goals that are difficult but realistic. It is argued that unrealistic goals should be avoided because if goals are so difficult that this results in continued failure, motivation will drop, and subsequent performance would deteriorate. This goal-attainability assumption has clearly had an impact on the sport psychology literature, with researchers strongly recommending to both physical educators and coaches that performance goals be realistic (Gould, 1986; Harris & Harris, 1984). However, the results of several studies by Weinberg and his colleagues using a variety of tasks have found no significant differences in performance when varying goal difficulty from easy to unrealistically high (Weinberg et al., 1990; Weinberg et al., 1987; Weinberg et al., 1991).

In terms of goal proximity, Locke and Latham (1985) have hypothesized that using short-term goals plus long-term goals will lead to better performance than using long-term goals alone. Other psychologists (Bandura, 1982; Carver & Scheir, 1982) have argued that short-term goals should produce the most substantial and long-lasting self-regulated behavioral change because these goals provide immediate incentives and feedback about an individual's progress, whereas long-term goals are too far removed in time to summon much effort or to direct one's attention. However, several studies (Hall & Byrne, 1988; Weinberg et al., 1985; Weinberg et al., 1988) have not found any differences between subjects setting long-term goals, short-term goals, or long-term plus short-term goals. In fact, in some studies, neither long-term goals nor short-term goals were significantly better in improving performance than do-your-best goals.

In contrast to these nonsignificant findings, Frierman, Weinberg, and Jackson (1990) found that long-term goals improved bowling performance significantly more than do-your-best goals, although no significant differences were found between the short-term goals group and the do-your-best group. In two experiments using high school students, Tennenbaum et al. (1991) found that both short- and long-term goals improved sit-up performance over a 10-week program compared to two different control conditions. However, it was the combined short-term plus long-term goal condition that produced the greatest improvement in performance.

The inconsistencies in the goal setting-performance findings in sport and exercise settings have led researchers to look for potential reasons for these equivocal results, especially in light of the overwhelming consistency found in organizational settings. A number of methodological and design limitations, along with potential mediating variables, have been identified as possible explanations for the inconsistent findings in the sport and exercise psychology literature. Specifically, researchers (Burton, 1989; Hall & Byrne, 1988; Locke, 1991; Weinberg, 1992) have noted the following problems: (a) spontaneous goal setting in control groups, (b) lack of measurement of personal goals, (c) competition among goal groups, (d) lack of commitment to experimenter-set goals, (e) high motivation of subjects in control conditions, (f) not equating subjects on baseline performance, and (g) task characteristics.

Thus, the increased interest by sport psychology researchers to conduct empirical studies that test different aspects of the goal-performance relationship has not, to date, yielded many consistent findings. And this has still left practitioners with a void in terms of understanding the goal-setting process. In looking back at

the past 7 years of goal-setting research in sport and exercise settings, it seems that we possibly have put the cart before the horse. In essence, we jumped right into attempting to conduct empirical, mostly laboratory-based studies without first trying to better understand how, when, and why athletes set goals as well as what kinds of goals are most important to the athletes. This type of approach is consistent with recent sport psychology research (e.g., Scanlan, Stein, & Ravizza, 1989), which found athletes (especially elite athletes) to be a rich source of data, thus helping both researchers and practitioners to gain a better understanding of the meaning of the sport experience. This increasing amount of applied work being done by sport psychologists is evidenced by three special issues of *The Sport Psychologist* focusing on Olympic, professional, and special population athletes (Gould & Roberts, 1989, 1991; Roberts & Halliwell, 1990).

As an initial step in this direction, the purpose of the present investigation was to gather preliminary information by assessing athletes' responses concerning the frequency, effectiveness, and importance of different types of goals to enhance performance. It seems reasonable that information derived from such a descriptive survey will help both practitioners and researchers better understand what athletes are actually doing in terms of goal setting as well as understand athletes' perceptions of the effectiveness and importance of goal setting. In addition to the descriptive nature of the present study, an attempt was made to investigate differences in goal-setting practices among different groups of athletes. These groups were selected based upon previous goal-setting literature as well as potential applications for the practice of goal setting in applied settings: (a) male versus female athletes, (b) starters versus reserves, (c) athletes differing in preferred goal difficulty, (d) athletes differing in goal preference, and (e) higher versus lesser ability athletes. From an applied perspective, results revealing no specific group differences could also provide important information because coaches would know that they need not be concerned with this particular variable when setting up a goal-setting program.

Method

Subjects

Subjects were 678 collegiate athletes (357 males and 321 females) from three NCAA Division I universities representing different regions of the United States. Subjects ranged in age from 17 to 25 years old. All subjects completed an extensive questionnaire administered by either their coaches or one of the authors during group meetings or team practices. Although athletes could choose not to participate, all of the individuals who were asked to participate did complete a questionnaire. The sample represented 16 different individual and team sports including 387 individual sport athletes (185 males and 192 females) and 291 team sport athletes (172 males and 129 females). The sports in the sample included baseball, basketball, volleyball, golf, tennis, swimming, wrestling, track and field, gymnastics, cross country, soccer, fencing, field hockey, ice hockey, lacrosse, and softball.

Questionnaire

The questionnaire was developed by reviewing previous qualitative and quantitative goal-setting literature in sport and exercise psychology. This was done to

better understand the goal-setting process and some of the potential mediating variables. Specifically, four experts with both practical and research experience in the goal-setting process were asked to develop different categories within goal setting as well as to provide input on the development of individual questions. Questions were then reviewed with some being eliminated and others being reworded to ensure that all the relevant goal areas were covered and to provide consistency across individual questions.

The questionnaire was then pilot tested with a group of 17 athletes to further refine the items. This was done to provide both face and content validity to the questionnaire. The final questionnaire had six different sections that provided the following information:¹ (a) demographic and background information including gender, experience, type of sport, starter/reserve, and perceived ability; (b) frequency of goal-setting strategy use from 1 (*not often*) to 9 (*extremely often*); (c) effectiveness of goal setting strategies from 1 (*not effective*) to 9 (*extremely effective*); (d) goal commitment and effort from 1 (*not at all*) to 9 (*very much*); (e) goal preference (ranking the importance of eight different competitive sport goals); and (f) preferred level of goal difficulty (ranking five different difficulty levels ranging from *extremely easy* to *extremely difficult*).

Results

Descriptive Statistics

Descriptive statistics were gathered on goal preference, preferred level of goal difficulty, goal frequency, and goal effectiveness. In terms of goal preference, improving overall performance (36%), winning (24%), and fun/enjoyment (19%) were the three most important goals for the athletes, accounting for 79% of all the top-ranked goal preferences. Despite the fact that these were NCAA Division I athletes in highly competitive programs, winning was not as important as improving their overall performance. In addition, having fun was rated almost as important as winning. The percentages for athletes ranking their number one (most important) goal preference are presented in Table 1.

In terms of goal difficulty, the three most preferred types of goals (rated number one in importance) were moderately difficult (60%), very difficult (20%), and moderate (14%). Note that these three goal difficulty preferences accounted for 94% of all the number-one rankings with easy goals and moderately easy goals rarely being chosen as the athletes' top goal-difficulty choice. Thus, athletes appear to favor moderately difficult to very difficult goals so that they can strive to improve instead of being satisfied with achieving an easy goal.

The goal frequency and goal effectiveness portions of the questionnaire each contained 25 goal-setting items with each frequency question having a corresponding effectiveness question. For example, a frequency question would ask, "How often do you set goals for what you want to do in practice?" The corresponding effectiveness question would ask, "How effective have your practice goals been in helping you develop as an athlete?" The overall mean for the

¹A copy of the questionnaire containing questions from all six categories can be obtained from the first author.

Table 1
Percentage of Goal Preferences Ranked Number One By Athletes

Goal preference	% ranking number one
Improving overall performance	36
Winning	24
Fun/enjoyment	19
Improving skills and techniques	6
Improving conditioning	5
Improving psychological skills	5
Social affiliation	2
Improve sport strategies	2

25 frequency items was 6.42 and the mean for the effectiveness items was 6.02. Remember that a 1 to 9 scale was employed; the athletes were reporting that they used goal setting fairly often and that they found goals reasonably effective. The top five most often used goal-setting strategies were (a) goals focusing on competition, (b) goals focusing on conditioning, (c) goals focusing on overall performance, (d) goals focusing on winning, and (e) goals focusing on improving specific sport skills. The top five goal strategies found most effective were (a) physical conditioning goals, (b) competitive goals, (c) rewards to help increase commitment to achieve goals, (d) long-term goals, and (e) skill/technique goals. Means and standard deviations for the top 10 frequency and effectiveness items are presented in Tables 2 and 3.

To follow-up on the descriptive statistics, a number of one-way ANOVAs and independent *t* tests were conducted to test for differences between groups (e.g., male–female, starter–reserve). Because a number of statistical tests were conducted, the alpha level was adjusted to .005 using the Bonferroni technique. This was done to help reduce the probability of making a Type I error and is appropriate, considering the exploratory nature of the present study.

Goal Preference

Because improving performance, winning, and fun/enjoyment were the three most important goals for the athletes, these provided the basis for analyzing differences based on goal preference. Specifically, athletes' number one choice was used to determine their goal-preference category and athletes were classified according to these preferences. Thus, this analysis included 79% of the sample because this group chose one of the above three goal preferences as number one in importance to them. Because this analysis included three groups, when significant differences were found, post hoc Newman Keuls tests were conducted to test for differences among the groups.

In terms of goal frequency, results indicated a significant main effect, $F(2, 529) = 5.60, p < .005$. Post hoc test indicated that athletes who were win oriented ($M = 7.4$), as compared to those who were performance oriented ($M = 6.3$) or

Table 2
Means and Standard Deviations for Top-10 Goal-Frequency Items

Rank	Item	<i>M</i>	<i>SD</i>
1	Setting competition goals	7.41	1.65
2	Setting physical conditioning goals	6.95	1.73
3	Setting performance goals	6.94	1.59
4	Setting outcome goals	6.57	1.93
5	Setting goals to improve specific skills	6.55	1.71
6	Setting goals outside of sport	6.47	1.89
7	Setting long-term goals	6.37	1.99
8	Setting team goals	6.36	2.19
9	Setting short-term goals	6.26	1.92
10	Setting goals for positive motivation	6.06	1.92

Table 3
Means and Standard Deviations for Top-10 Goal-Effectiveness Items

Rank	Item	<i>M</i>	<i>SD</i>
1	Setting physical conditioning goals	6.89	1.77
2	Setting competition goals	6.53	1.70
3	Using rewards to increase goal commitment	6.50	1.91
4	Setting long-term goals	6.41	1.87
5	Setting goals to improve specific skills	6.35	1.73
6	Setting short-term goals	6.33	1.81
7	Setting performance goals	6.31	1.84
8	Setting psychological skill goals	6.11	1.99
9	Setting goals for positive motivation	6.10	1.97
10	Setting goals for overall performance	6.05	1.79

fun oriented ($M = 6.4$), set significantly more outcome goals. In addition, win-oriented athletes ($M = 6.7$), as compared to performance-oriented ($M = 5.2$) or fun-oriented ($M = 5.4$) athletes, felt that outcome goals were significantly more important than performance goals. Results also revealed, $F(2, 529) = 5.47, p < .005$, that athletes who were performance oriented set significantly more practice goals than athletes who were winning oriented. Finally, performance-oriented athletes, $F(2, 259) = 9.73, p < .005$, set significantly more performance goals ($M = 5.9$) than athletes who were oriented toward winning ($M = 4.5$) or having fun ($M = 5.1$).

In terms of goal effectiveness, results revealed that performance-oriented athletes ($M = 6.5$) felt that setting goals to improve performance, $F(2, 529) = 6.75, p < .005$, was more effective than did fun-oriented athletes ($M = 5.7$). In addition,

performance-oriented athletes ($M = 6.7$) felt that short-term goals, $F(2, 259) = 5.28$, $p < .005$, were more effective than did either winning-oriented athletes ($M = 5.8$) or fun-oriented athletes ($M = 5.9$). However, winning-oriented athletes felt that setting outcome goals, $F(2, 529) = 6.83$, $p < .005$ ($M = 6.7$), and using rewards to increase commitment to achieving goals, $F(2, 529) = 6.81$, $p < .005$ ($M = 7.0$), were more effective than did performance-oriented athletes ($M = 5.7$, and 6.1 , respectively).

Goal-Difficulty Preference

Because 94% of the athletes chose moderate, moderately difficult, or very difficult goals as their top choice in terms of goal difficulty, these three categories were used in the data analysis. Results indicated that athletes who preferred moderately difficult goals set significantly more short-term goals, $F(2, 646) = 4.81$, $p < .005$; long-term goals, $F(2, 646) = 4.73$, $p < .005$; practice goals, $F(2, 646) = 4.96$, $p < .005$; and strategy goals, $F(2, 646) = 4.80$, $p < .005$; and more often evaluated the effectiveness of goals, $F(2, 646) = 4.82$, $p < .005$, as compared to athletes who preferred moderate or very difficult goals.

A number of differences also appeared in terms of goal frequency and effectiveness for athletes differing in goal preference. Specifically, results revealed that athletes who preferred moderately difficult goals or very difficult goals set significantly more goals to improve performance, $F(2, 646) = 5.21$, $p < .005$, and short-term goals, $F(2, 646) = 5.45$, $p < .005$, than did athletes who preferred moderate goals. Athletes who preferred very difficult goals felt that competition goals, $F(2, 646) = 4.91$, $p < .005$; making goals public, $F(2, 646) = 4.77$, $p < .005$; and strategy goals, $F(2, 646) = 4.88$, $p < .005$, were more effective than did athletes who preferred moderate goals. In addition, athletes who preferred very difficult goals felt that very difficult long-term goals, $F(2, 646) = 9.25$, $p < .005$, and very difficult short-term goals, $F(2, 646) = 9.49$, $p < .005$, were significantly more effective than did athletes who preferred moderate or moderately difficult goals.

Gender

Results comparing males and females on goal frequency and effectiveness were very consistent in that female athletes used goals more often and found them more effective than did their male counterparts. In terms of goal frequency, results of independent t tests ($p < .005$) revealed that females set short-term goals ($M = 6.4$ vs. 5.9), set team goals ($M = 6.8$ vs. 6.0), set psychological skills goals ($M = 6.1$ vs. 5.4), and wrote down their goals ($M = 5.1$ vs. 4.0) significantly more than did male athletes. The only area in which males set more goals than females was outcome goals ($M = 6.0$ vs. 5.2). Goal effectiveness findings revealed that females found creating short-term goals ($M = 6.7$ vs. 6.0), team goals ($M = 6.4$ vs. 5.5), and psychological skills goals ($M = 6.4$ vs. 5.7); evaluating goals ($M = 6.0$ vs. 5.3); writing goals down ($M = 5.5$ vs. 4.3); and developing a plan to achieve goals ($M = 6.1$ vs. 5.4) to be significantly more effective than did their male counterparts. Thus, female athletes are using goal setting more extensively and finding it more effective than male athletes are.

Starters Versus Reserves

Similar to the gender differences, results were very consistent when comparing starters versus reserves. That is, starters used goals more extensively and found

them more effective than reserves did. Specific results from a series of independent *t* tests revealed that starters, as compared to reserves, set significantly more long-term goals ($M = 6.6$ vs. 6.0), team goals ($M = 6.8$ vs. 5.9), goals to improve performance ($M = 7.0$ vs. 6.4), and goals to maintain positive motivation ($M = 6.4$ vs. 5.6) and that they wrote down goals ($M = 4.8$ vs. 4.0), publicly displayed their goals ($M = 4.4$ vs. 3.6), and had specific plans to achieve goals ($M = 5.7$ vs. 4.8). Most of these differences in goal frequency were carried over into goal effectiveness. Specifically starters, as compared to reserves, felt that setting long-term goals ($M = 6.6$ vs. 5.9), goals to improve performance ($M = 6.7$ vs. 5.8), competitive goals ($M = 6.7$ vs. 6.0), psychological skills goals ($M = 6.3$ vs. 5.6), goals to maintain confidence ($M = 6.1$ vs. 5.3), and goals to maintain positive motivation ($M = 6.3$ vs. 5.7) and that writing goals down ($M = 5.2$ vs. 4.3) and having specific plans to achieve goals ($M = 6.0$ vs. 5.2) were significantly more effective.

Ability

Athletes were divided into higher and lower ability levels based on their response to the question asking them to "rate your athletic ability compared to the best athletes you regularly compete against" from 1 (*a lot lower*) to 9 (*a lot higher*). Athletes scoring 1, 2, or 3 were categorized as lower ability and those scoring 7, 8, or 9 were classified as higher ability. Results were very consistent with higher ability athletes using goals more frequently and finding them more effective than lower ability athletes. Specifically, results from independent *t* tests revealed that higher ability athletes made their goals public and had specific plans to achieve their goals significantly more often than did lower ability athletes. In addition, results indicated higher ability athletes felt that setting long-term goals, competitive goals, strategy goals, psychological skills goals, outcome goals, and goals to improve performance were significantly more effective than did lower ability athletes.

Discussion

The purpose of the present investigation was to provide some exploratory and descriptive information concerning the perceived frequency, effectiveness, and importance of different goal-setting strategies among Division I college athletes. In addition, differences among selected subgroups such as males versus females, starters versus reserves, individual versus team, and higher ability versus lower ability were also investigated. Finally, athletes differing in their preferred goal difficulty and in their goal preferences were compared in terms of goal frequency and goal effectiveness. Results revealed a wide range of significant findings in light of the exploratory nature of the study. Therefore, instead of attempting to discuss all significant findings, it would appear more parsimonious to highlight the most consistent and important findings as well as to derive future directions for research based on this initial, mostly descriptive, data set.

Goal Preference

Results revealed that improving overall performance, winning, and having fun were the three most important goals for Division I college athletes. Many sport

psychologists have been fighting against the "winning is everything" mentality (especially for youth athletes) and have tried to refocus goals toward self-improvement and fun/enjoyment (Burton, 1989; Duda, 1992; Scanlan, Stein, & Ravizza, 1989). In essence, we have recently begun to question whether sport's pervasive preoccupation with winning may actually be responsible for many athletes' anxiety, motivation, and self-confidence problems. It is not that winning is unimportant; it is just that, for many athletes and coaches, it has seemingly become the only goal worth pursuing.

However, results from the present investigation demonstrate that intercollegiate athletes spread out their emphases on improving their own performance (performance goals), winning, and having fun, which is consistent with research using youth athletes. In essence, these three goals appear to be interrelated in that reaching one's own performance goals would be tied to winning, and this in turn would typically mean more fun. Thus, instead of viewing these three goals as totally separate, it would seem more parsimonious if researchers would take a more integrated and interactive approach to discern the interrelationships among these three important goals.

One might expect that Division I college athletes would have considerable pressure to win, given the importance of a successful athletic program to the financial stability of today's athletic departments and, in some cases, the university community at large. But these athletes seem mostly concerned with the goal of improving their own performance, having secondary emphases on winning and having fun. Performance as a primary goal makes sense for two very different reasons. First, because many athletes are on scholarship, as long as they continue to perform well, they will retain their scholarships even if the team is losing. However, besides this extrinsic incentive, another reason that a performance orientation also makes sense is couched in the concepts of intrinsic motivation and competence. Specifically, athletes at this level tend to get satisfaction from the idea of improving themselves and reaching their own challenging goals. Although they cannot control team and individual outcomes, they can control how they perform on the playing field and can take a sense of pride in accomplishment in performing up to their capabilities, regardless of how their opponents or teammates play. For nonscholarship athletes, this sense of pride and competence takes on greater importance in that they are not receiving only extrinsic inducements to participate.

In terms of some future directions for research, it would be interesting to determine the goal orientations of coaches, because they are the ones who typically have their jobs on the line if they do not consistently have a winning record. In addition, more research is necessary to determine whether setting performance goals actually enhances performance significantly more than setting outcome (winning) goals. Burton (1989) found some support for the notion of performance goals enhancing performance as well as improving competitive cognitions such as self-confidence. More controlled intervention studies, however, are needed to test the effectiveness of performance goals.

Furthermore, we need to know whether athletes who have winning as their prime orientation can actually be taught to change their goal preference. Some research in the educational world using elementary school children (Ames, 1992) has indicated that goal orientations can be changed over the course of a school year from outcome-oriented to mastery-oriented, and these changes were then

reflected in student performance. However, in a sport environment, athletes may not need to change their focus. Rather, for some athletes, a winning orientation might produce the best performance and greatest persistence. As noted earlier, it may be the interaction of winning, performance, and fun orientations that is critical, rather than simply saying that an athlete who has a winning orientation should change to a performance orientation. Thus, we first need to find out more about athletes' perspectives concerning their goal orientations in sport before goal-setting intervention studies using athletes and athletic teams can be effectively implemented.

Preferred Level of Goal Difficulty

Results were extremely consistent regarding goal difficulty preference. First, athletes preferred to set moderately difficult and very difficult goals more than moderate or easy goals. Second, athletes preferring moderately difficult and very difficult goals found their goals more effective than did athletes preferring moderate goals. This is consistent with much of the research in the organizational literature, which suggests that goals should be difficult and challenging, but realistic. In fact, Locke and Latham (1985), in their article articulating the potential for goal setting in sport settings, state that goals should not be so difficult that the person fails to take them seriously. Unrealistic goals would also likely result in continuing failure, which in turn would lead to a drop in motivation. Conversely, goals that are very easy to attain will lead to less than optimal performance due to lack of effort.

This call for avoiding extremely difficult or extremely easy goals was not in evidence in the present data as 20% of the sample preferred very difficult goals that were substantially above the level at which they believed they could perform. Remember that several studies (Garland, Weinberg, Bruya, & Jackson, 1988; Weinberg et al., 1987; Weinberg et al., 1991) in sport and exercise settings have found that unrealistically high goals did not produce any decreases in performance. In fact, under certain circumstances and for certain individuals, unrealistically high goals produced the highest level of performance. Thus, it appears that, although it has been recommended that athletes avoid unrealistically hard goals, a fair percentage of athletes still prefer these difficult goals. This might be especially indicative of intercollegiate athletes who typically like to be challenged. And, when these individuals are assigned very difficult goals in research studies, their performance does not suffer. More research is necessary to discover under what conditions, and for what kinds of athletes, unrealistically high goals can improve or hinder performance. In addition, it would be informative to discover how athletes go about determining how difficult to make their goals.

Gender Differences

Results indicated that outcome goals were the only area in which male athletes set more goals than female athletes. This is consistent with previous research (Duda, 1986; Gill, 1986) which has found that females are more task oriented (own performance), whereas males are more ego oriented (winning). In general, males tend to be oriented toward winning, competition, and social comparison; females are more oriented toward their own personal standards of excellence. The emphasis on winning for males in intercollegiate athletics is still greater

than that for females, although females are certainly very interested in winning. This emphasis on winning is exacerbated, in part, by the revenue that can, and is, generated through male collegiate sports, especially sports such as football and basketball. Thus, male athletes' goals tend to reflect this orientation and emphasis on winning.

Other than outcome goals, female athletes consistently set more goals and found the goals more effective than did male athletes. This was especially the case in terms of short-term goals, performance goals, and team goals, as well as writing goals down. It appears that female athletes are much more tied into the goal-setting process than are male athletes. It is possible that males are focused on winning, and that is the goal that is most important. It is interesting to note that Burton (1989) found that female collegiate swimmers were more receptive to a performance-oriented (as opposed to winning-oriented) goal-setting program than were male collegiate swimmers. In addition, throughout the course of the goal-setting intervention program, females were setting more accurate goals than their male counterparts.

Because results from the present investigation revealed that female athletes used goal setting more frequently and found it more effective than did male athletes, it makes sense that they would be both more supportive of a formal goal-setting program (especially one that emphasizes performance goals) and more accurate in setting goals since they probably have more experience in setting goals. More research is needed to investigate what types of goal-setting programs might be most beneficial and effective with male and female athletes.

Starters Versus Reserves

As might be expected, starters used goal setting more frequently and found it more effective than did reserves. It is interesting to note that starters were using goals more often in a variety of areas such as improving performance, improving their psychological skills, writing goals down, and setting up specific plans to achieve their goals. Because starters obviously get more playing time and have a sense of how long they will play, they can set their goals accordingly. In addition, starters are likely to get more feedback from coaches on what specific things they want them to accomplish during a competition.

It might be difficult for a reserve player to set goals because he or she may not play at all or may get so little playing time that it is hard to set any specific, measurable goals. Coaches need to be aware of this and need to make sure that the reserves are encouraged to set goals to the same degree as starters. This can be done particularly for practices because the reserves should be getting an opportunity to play and could work on meeting their practice goals. And, by meeting their practice goals, it should make it more likely that they will get increased playing time in the actual competitions.

Ability

Results revealed that athletes higher in perceived ability felt that goal setting was more effective for them in a number of areas than did lower perceived-ability athletes. These included both performance and outcome goals as well as psychological skills goals. Due to the questionnaire nature of the study, it is not possible to determine whether effective goal-setting practices helped athletes to

achieve more and thus perceive themselves to be higher in ability, or whether higher perceived-ability athletes simply feel that goal setting is more effective for them than athletes lower in perceived ability. In either scenario, there is a definite relationship between perceived ability and goal-setting effectiveness, which might be related to the previous findings concerning starters and reserves. It is likely that the athletes lower in perceived ability are probably not starting as much as those higher in perceived ability. Thus, once again, coaches need to be sensitive to all of the athletes on their team and need to make sure that the lower ability athletes are included in any goal-setting program and are encouraged to set goals and work hard to achieve these goals.

Future Directions for Research

As noted earlier, this is a preliminary, mostly descriptive, look at goal-setting practices of collegiate male and female athletes. There are certainly limitations to conducting survey research, such as social desirability, response set, and lack of depth (i.e., no chance for elaboration or athlete insight). Keeping these points in mind, from our initial study there seems to be several fruitful areas of future research. First, to supplement and complement these questionnaire findings, qualitative data needs to be collected. This should provide greater in-depth understanding of the goal-setting process, barriers toward reaching goals, and the ways in which athletes actually set and prioritize goals. Second, it would seem interesting to compare athletes' versus coaches' perceptions concerning the use and effectiveness of different goal-setting strategies. Third, the degree of congruence between coaches' and athletes' goal preferences would appear to be an important consideration (Grove & Hanrahan, 1988). For example, if a coach's primary goal is winning and an athlete's primary goal is improving performance, then this discrepancy could lead to a number of problems in communication. Fourth, developmental differences in goal-setting strategies would appear to be another potential area of research. A life-span approach should be taken to include young children through older adults. Finally, further research should focus on the barriers that prevent individuals from achieving goals as well as factors that help facilitate goal attainment. This type of information would be useful in maximizing the effectiveness of our goal-setting programs with athletes. This would not only help improve performance but also would enhance the personal growth and development of all athletes.

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