

THE USE OF SPORT PSYCHOLOGY TO IMPROVE SPORT PERFORMANCE

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Introduction

Sport psychology is the science of behavior applied to exercise and sport participation. Increasing numbers of athletes and coaches are using sport psychologists to help them gain a personal and competitive edge--to manage stress and anxiety more effectively, improve concentration and motivation, increase confidence, and promote better communication. This field has been percolating for 70 years, yet many people still think of it as commonsensical mind games. The Gatorade Sports Science Institute convened a panel of four of the leading experts on sport psychology to help clarify the meaning of this important discipline, describe its recent history, and project its future.

How has the use of sport psychology changed among elite athletes over the last 20 years?

Kirschenbaum : Sport psychology has grown remarkably in recent years. During the past decade, two new scientific journals and two major national organizations that address the area of sport psychology have emerged. Parallel increases have been apparent in the number of books on the topic and in the growth of involvement of sport psychologists with Olympic teams. As further evidence of the increased popularity of the field, a recent article noted that one-third of touring professional golfers are currently using sport psychologists. Five to ten years ago, few professional golfers utilized a psychologist.

Williams : Twenty years ago most elite athletes had never heard of sport psychology and gave little or no thought to training the mental side of their games. Many of these athletes possessed excellent psychological skills, but the development of these skills occurred largely by chance and without conscious recognition. For the vast majority of athletes, efforts to improve performance consisted only of looking for advances in physical training and conditioning, biomechanics, and equipment. In contrast, all of today's elite athletes probably have heard of sport psychology. In ever increasing numbers they are seeking the services of sports psychologists as the "competitive edge" to finish a step ahead of the competition.

McCann : I believe that the most dramatic changes have occurred in the last 10 years, with the development of a "common language" of sport psychology. This language accompanies a specific set of mental skills for sport that are definable, understandable, and teachable. Athletes in the 1980's used to come to my door and say, "I've heard that sport psychology can help athletes." Now athletes are informed consumers who state, for example, "I'm having trouble with competition anxiety, and I was hoping that you could help me make a relaxation tape." Elite athletes and coaches do not always understand the theoretical underpinnings of the science of sport psychology, but they are familiar with the sport specific applications of that science, and these applications are in great demand.

Meyers : For many, the 1984 Summer Olympic Games in Los Angeles served as an introduction to applied sport psychology. The use of sport psychology programs by Soviet and East German athletes and coaches focused a

great deal of attention on this emerging field. As some of the other respondents have stated, there are few elite athletes at the present time who do not have at least a rudimentary awareness of the area. The United States Olympic Committee includes a sport psychologist in its Sports Science division and has encouraged the national governing bodies of the various Olympic sports to include sport psychology in their athletes' training programs. Increasingly, sport psychology has become as common a component of elite athletic preparation as good nutrition and proper medical care.

What is the current state of the science that supports the use of psychological interventions to improve sport performance?

Williams : Individual variation certainly exists. However, a review of peak performance literature clearly indicates that successful athletes tend to have higher levels of self-confidence, a more task-oriented focus of concentration, a lesser likelihood of becoming distracted, a greater ability to keep anxiety at facilitative levels, a more positive preoccupation with sport (imagery and thoughts), and more determination and commitment compared to less successful athletes. These psychological characteristics can be developed through appropriate psychological interventions.

Using meta-analytic procedures, reviewers of intervention research found support for mental rehearsal (imagery), cognitive restructuring interventions, goal setting, and relaxation interventions to improve athletic performance in diverse sports such as golf, karate, skiing, tennis, and baseball.

Meyers : Serious evaluative research in this area goes back only about 25 years, but there is now a good deal of evidence to support the use of many of the interventions that Dr. Williams alluded to for athletic performance enhancement. A recent review of the literature that I completed with a colleague, Dr. Jim Whelan, found that contemporary sport psychology interventions are significantly better than control conditions for improving athletic performance. Unfortunately, there are few experimental evaluations of sport psychology interventions using elite athletes. We know that these programs work with recreational through varsity athletes, but we've yet to demonstrate the viability of these interventions with national and world class athletes. However, all existing evidence suggests that these interventions would be effective with this population as well.

McCann : I agree with Dr. Meyers. The psychological interventions used in applied sport psychology are typically well-researched cognitive behavioral techniques drawn from applied clinical and counseling psychology. Thus, the interventions are sound. However, there has been a tendency to use college students as subjects in many of the research studies conducted to date. There is a great need for more controlled studies with elite athletes to determine what modifications, if any, would be useful for psychological interventions with elite level performers.

Kirschenbaum : In addition, more follow-up studies are needed to show the extent to which interventions produce long term impact. However, sport psychology interventions hold a great deal of promise; these interventions can produce reliably positive and, in some cases, remarkably positive effects. Several dozen studies clearly indicate that sport psychology interventions lead to improvements in performance compared to control or alternative interventions.

Under what circumstances, if any, can psychological interventions lead to more harm than good for athletes?

McCann : Of course, any intervention can cause harm. Poor coaching, a misdiagnosis by a sports medicine physician, or a trainer who ignores a serious stress fracture are all examples of health professionals using interventions with potentially harmful consequences. Making sure that a sport psychologist has the proper training and credentials (i.e. membership in the USOC Sport Psychology Registry or certification by the Association of Applied Sport Psychology (AAASP)) is the best guard against harmful intervention.

The question can also be interpreted as suggesting that talking about a potentially negative issue can actually "cause" it to occur. For example, a coach might say "why talk about extra pressure at the Olympic Games? Aren't you just planting a seed?" However, the bottom line for the athletes that I work with is that pressure is real at the Olympic level, and mentally prepared athletes handle that pressure with the greatest ease. You cannot get very far in sports these days if you pretend that environmental factors don't exist. Of course, an effective sport psychologist won't just raise these issues; they will also have potential solutions to each of these challenges.

Meyers : It's no accident that one of the dictums of medical treatment is "Do no harm." Any intervention, medical or psychological, can produce harm (as well as benefit), so it is important for a client to be a careful, informed, and assertive consumer of such services. First and foremost, there is no guarantee that the provider of services will do

a competent job. The client should expect the provider to lay out an intervention plan that informs the client of what will happen in their professional relationship. This plan should detail the goals of the work and expected performance changes, expected length of the intervention, the duration of each session, and any other requirements such as fees and payment schedules. The client should be free to request periodic updates from the provider on his or her progress, and inquire about the ethical codes that the provider works under (i.e.-under what circumstances can confidentially be broken?). Not all performance enhancement interventions will result in positive change but an alert and involved athlete-consumer should receive maximum benefit and maximum protection.

Kirschenbaum : Psychological interventions can have a negative impact on performance under certain conditions. For example, some research indicates that focusing on details of a technique when performing complex motor movements can sometimes decrease performance. Having athletes concentrate on how their hands are moving or their swing is taking shape could lead to at least a temporary interference in smooth motor performance. Thus, if a sport psychologist encourages athletes to focus on microscopic aspects of their performance he or she can adversely affect athletic performance.

It may also be harmful for sport psychologists to encourage all athletes to try to attain a certain level of calm before performing. Certain sports and certain movements within sports generally require a higher level of activation. Also, some athletes tend to respond at their best when they are at high levels of activation or arousal.

Competent sport psychologists are likely to observe and closely evaluate the effects of their interventions with athletes. If the intervention appears to be doing more harm than good, the psychologist should be able to recognize this, and make adjustments accordingly.

Williams : Employing appropriate interventions at inappropriate times can also adversely affect performance. For example, when good performance is critical and insufficient time exists to learn thought control and relaxation techniques, increasing an athlete's awareness of dysfunctional thinking or undesirable tension may result in poorer performance. A tennis coach would not ask a player to switch to a two handed backhand a week prior to a major competition; neither should a sport psychologist make major changes in mental skills without allowing appropriate practice time. It goes without saying that unqualified sport psychologists are more likely to make the types of mistakes that lead to poorer performance.

What have been the major barriers to making sport psychology more accessible to athletes?

Meyers : As with any new profession there is often skepticism and resistance. Many elite athletes justifiably feel that they manage the emotional side of their competitive world just fine without outside help. Coaches are often reluctant to give up control, or at least the perception of control over their athletes. And resource-starved administrators must find additional funds to pay for these professional services.

Sport psychologists must continue to prove themselves in the sport arena. That's why research on sport psychology interventions must continue. Athletes, coaches, and administrators will only be completely convinced of the value of these services when the evidence is consistent and indisputable. This means that sport psychologists must work both in the lab and in real-world competitive settings to demonstrate the merits of their efforts.

Finally, if these services are worthwhile, then priority must be given to funding these activities. Unfortunately, professionals simply cannot develop without a professional career path, and that means that athletes and sport organizations have to find a way to support the work of the sport psychologist.

Kirschenbaum : An additional factor is the relatively limited number of well-trained sport psychologists in the United States. There are less than 100 people currently on the U.S. Olympic Committee's Sport Psychology Registry. There are only about 100 people who are certified by AAASE. These limited numbers of people have limited resources for marketing. Although sport psychologists are distributed around the country, it is difficult for athletes to find them. These barriers are being broken down; however the efforts have been slow and gradual and are not supported by a major public relations push.

As Dr. Meyers suggested, the availability of funding for sport psychology research has been limited as well. In addition, competition from other fields has detracted from the growth of this specialty area. For example, psychologists have relatively little control over who attends Olympic events and who works with elite athletes. The control lies more in the hands of the administrators, coaches, and physician groups, and the acceptance of any type of psychological intervention in our culture is still somewhat limited.

McCann : My views are similar to those of Drs. Meyers and Kirschenbaum. The primary barrier, in my opinion, is the discrepancy between the large amount of publicity about the field and the relatively few trained professionals in the field. In many communities, there are no trained sport psychologists, and local athletes are forced to acquire information through reading materials. As more "self-help" type sport psychology books become available, the average athlete will have access to the basic concepts and language of sport psychology. Of course, going from the general concepts to the specific situation of each athlete will always be facilitated by the presence of a professional.

Williams : I think that unqualified individuals ineffectively practicing sport psychology have also led to the lack of trust and credibility that some coaches and athletes feel toward the field of sport psychology. To lessen this occurrence, one sport psychology organization (AAASP) has established criteria for training sport psychologists, and implemented a procedure for certifying consultants. Unfortunately, few individuals within the athletic community know about these efforts. They do not know what to look for when selecting a sport psychologist, how to get lists of qualified individuals, or the variety of services that these individuals might offer. Regardless of the training and education efforts, however, a remaining roadblock is the stigma that many athletes attach to going to a sport psychologist. Education and appropriate exposure might lessen this roadblock.

What do you envision as the future of applied sport psychology over the next ten years?

Williams : Applied sport psychology will continue to grow as an academic discipline and professional practice, but I don't see it growing as fast as it has in the last ten years. I do envision more theoretical advances and documentation of the efficacy of performance enhancement interventions. Training standards for sport psychologists will increase in rigor and result in greater emphasis on interdisciplinary training and supervised internships. More academic programs will offer courses in applied sport psychology, including courses for coaches and athletic trainers. I also foresee wider acceptance of the field in the sports medicine and general psychology communities. However, although more athletic departments, National Governing Boards, and professional athletes will use sport psychologists, budgetary constraints will still restrict the potential for employment opportunities.

Kirschenbaum : I believe that we will witness an accelerated growth in applied sport psychology in the next ten years. Public and major athletic organizations will become increasingly aware of what sport psychologists are, how they work, and where to find them. As this occurs, there will be more and more demand for their services. This growth might parallel the increased acceptance of behavioral medicine over the last two decades. What was once a small subspecialty in the field of psychology has become a dominant force in clinical psychology that is represented in almost every medical school and every major hospital in the United States today. I think that the same will occur with sport psychology. People who are well-trained and knowledgeable in this area are going to become more sought after as their work becomes more familiar to amateur and professional sport organizations. Hopefully, there will be a concomitant increase in research to support, test, and improve the usefulness of these approaches.

McCann : I envision growth as well. Growth in the number of trained professionals. Growth in employment settings for these professionals. Growth in the scientific knowledge base with elite athletes. Growth in the application of sport psychology principles into areas such as business. I also envision changes in the methodology of sport psychology. Although generalized techniques for enhancing performance will exist, these techniques will become more individualized. The first CD-ROM program for an individualized sport psychology program has been produced, and the next ten years should bring modifications in these programs so that they may serve as tutorials for athletes and coaches.