

***FENCING
PSYCHOLOGICAL
SKILLS TRAINING
MANUAL***

JOHN HEIL & CLARK ZEALAND

2001

TABLE OF CONTENTS

| | |
|---|-----------|
| PREFACE | 2 |
| ABOUT SPORT PSYCHOLOGY | 3 |
| SPORT PSYCHOLOGY TEST PROFILING | 6 |
| GOAL SETTING | 7 |
| THE CARDINAL SKILLS OF MENTAL TRAINING | 10 |
| RELAXATION/ACTIVATION | 12 |
| CONCENTRATION | 15 |
| SELF-TALK | 19 |
| IMAGERY | 25 |
| PERFORMANCE ROUTINES | 28 |
| SPORT PSYCHOLOGY IN ACTION | 30 |
| APPENDICES | 33 |

Preface

Excellence grows out of a balance of opposites – planning and intuition, emotion and rationality, restraint and risk-taking. Often this melding of opposites is conveyed in the metaphor of “art and science.” In fencing, the art lies in the everyday application of performance principles by the coach and the athlete. It is in the heat of the action where insights initially develop and where found knowledge is ultimately applied. The role of sport science is to enhance performance by identifying key questions and arriving at specific answers through precise and objective process of measurement and evaluation. Once in the hands of the coaches and athletes, new sport science principles may be applied, tested and refined. In the way the blending of art and science leads to optimal performance in sport.

Through the last quarter-century, an increasing trend toward specialization in the sciences and a growing appreciation of the value of sport and fitness have resulted in the emergence of the sport sciences. Out of the sciences of physiology, nutrition, psychology, biomechanics and medicine have emerged specialized subdisciplines focused on athletic performance. Supporting these sciences is an increasing array of complex technology.

In the last dozen years, there has been a virtual explosion of information in the sport sciences. At the 1998 meeting of the American College of Sports Medicine, there were nearly 1500 scientific presentations. In sport psychology alone at the annual meeting of the Association for the Advancement of Applied Sports Psychology, approximately 200 papers are presented. Increasingly, coaches and athletes have needed to turn to sport scientist to utilize this growing body of knowledge with optimum effectiveness. Collaborative relationships between coaches and athletes and sport scientist are growing in the Olympic movement as well as in professional and collegiate sports.

Practitioners and researchers in sport psychology have developed numerous psychological interventions for enhancing performance. When coaches and athletes turn to sport psychology to gain a competitive edge, they learn ways to manage competitive stress, control concentration, improve confidence, increase communication skills, promote team unity, and many other mental factors in sport.

The goal of this manual is to empower coaches and athletes to build psychological skills by providing methods and guidelines for mental practice. The benefits from psychological skill development will not only be seen in sport performance, but also in other areas of performance. Mental skills are life skills.

While written for National Coaching Development Program, the manual is designed to be used by both athletes and coaches.

About Sport Psychology

The mental game, the zone, focus – by whatever name, the meaning is the same. Success in sports is linked to psychological skills. The search for the mental edge in competition has given rise to sport psychology.

Why?

Excellence will not settle for less than the best that can be. Research with Olympic athletes shows that “sport thinking” pervades their consciousness. It goes beyond what they do, to define who they are. This is why athletes who take their mental game to the highest level usually experience success in life after sport. Hall of fame baseball player, Yogi Berra, said, “sport is 50% physical and 90% mental.” With his unique way with words, he has told us both how critical the mental game is to success and how difficult it is to understand. It is one of those things “you know when you see,” but are left wondering where does it come from?

Where?

John Steckbeck, author of *The Carlisle Indians*, related the following story of Jim Thorpe. Jim Thorpe, along with the rest of the U.S. Olympic team was heading toward Sweden for the 1912 Olympics on-board ship. Obviously, their training was seriously curtailed. One day, Jim was observed to be sitting quietly by himself, eyes cast downward looking at the deck. Someone approached and asked if things were all right with him. He responded that he was fine. Jim then pointed out two marks that he had made on the deck mentioning that it was the distance he planned to cover in the long jump. Jim Thorpe went on to have a successful long jump, to win the gold medal in the decathlon, and to be named “the World’s Greatest Athlete” by the King of Sweden. Like Jim Thorpe, all outstanding athletes have a strong mental game, but are often silent about it. Until recently, we have lacked the means for sharing the mental secrets of successful performance from one athlete to the next and one generation to the next. Sport psychology has appeared to fill this void.

Ultimately, the mental game begins with the athlete. As one strives for competitive excellence, success is foreseen in the mind’s eye. In this sense, seeing gives rise to believing. Envisioning the path to success is a central element of mental training. Sport psychology is designed to systematize and refine the athlete’s mental game already shaped through trial and error of training and competition. High-performance sport psychology strives to meet two fundamental goals: (1) building the mental skills upon which success depends and: (2) clearing away the mental clutter that can sometimes interfere with the effective use of mental skills development through training. All of us carry some psychological baggage linked to unsuccessful performance and unfortunate like events. The path to success is clear and straighter as mental baggage is left behind along the wayside.

What?

Technically, sport psychology is a by-product of psychology and the sport sciences. It draws on many of the methods of psychology, but focuses these on the unique needs of the athlete. As an academic discipline, it covers a wide range of topics including the health benefits of exercise, cultural diversity, aggression and violence, child development through sport, and much more. Sport psychology is reaching all levels of sport from professional and Olympic athletes to youth sport competitors. As an applied science, sport psychology focuses on both the well being of athletes and successful performance. However, the heart of sport psychology is in performance enhancement through mental training. Mental training methods include relaxation/activation, refining concentration, creating positive mental imagery, optimizing self-talk, and developing competition routines. The pressures of sport can also bring about problems and sport psychology will deal with these too. Specialized approaches have been developed to work on managing pain and injury, dealing with overtraining and burnout, and coping with issues ranging from retirement to substance abuse.

Sport psychology can take many forms. It is both set of ideas, and a guide to action. At its best, it resembles coaching in that it is practical, sensible, and improves performance by developing competitive skills. Of course, there is no magic, no shortcuts. For sport psychology to work, it takes a committed effort over time. In essence, mental skills must be developed and refined through practice and repetition much like physical skills.

It can be useful to think of the sport psychologist as working in parallel with the strength and conditioning coach. Just as the strength and conditioning coach deals with the basics of physical fitness and sport skills, the sport psychologist deals with the fundamentals of mental performance. Both roles have arisen as a consequence of a growing body of theory and research in sport science, and increasing specialization within coaching.

Who?

The sport psychologist typically has a doctorate with a specialization in sport psychology either from a clinical/counseling psychology program, or from an exercise and sport science department. Any given psychologist's skills and range of expertise will be a reflection of this initial training. Because sport psychologists may pursue many different pathways to developing expertise, it is useful for the consumer to ask pertinent questions of the sport psychologist in regard to his or her training and experience and approach to working with athletes. Over the last ten years, two standards of competence had been recognized. The United States Olympic Committee has developed a Sport Psychology Registry based on review of an individual's credentials. The Association for the Advancement of Applied Sport Psychology has developed a more in-depth evaluation and credentialing procedure that leads to forma certification. Recently, these two groups have combined their efforts in order to recognize a basic level of competence in the practice sport psychology.

Many, but not all sport psychologists have a background as competitive athletes. Often, athletes and coaches ask if it is necessary for a sport psychologist to have a high level of training in a particular sport. Although it is important for the psychologist to gain a fundamental understanding of the sport of each athlete with whom he or she works, it is not essential that they have a high level of expertise in a particular sport. Usually, sport psychologists work with athletes in a variety of sports. Typically, they will adopt a teamwork approach with the athlete (and often the coach) providing information about the physical and mental demands of sport – and the sport psychologist offering expertise on mental training. In this way, sport psychology is typically a collaborative effort.

How?

The simplest and most direct approach to improving one's mental game is to subject it to careful scrutiny. Working with the coach to identify the athlete's mental strengths and the areas that he or she would like to improve, is the first step. The next step is to set specific and realistic goals for developing and refining mental skills. Consistently practicing the methods presented in this manual will improve your performance. However, you must remember that the mental workings are less apparent than technical and physical sport skills and thus present their own distinct challenges in assessment and application. The successful athlete has a strong mental game, which is realized through diligent work and consistent practice.

Sport Psychology Test Profiling

Measurement is at the heart of sport where competitive excellence is quantified exhaustively and in exquisite detail. Assessment is either objective, like time and distance, or subjective, like evaluating form or the quality of a performance. This kind of assessment in sport, simply stated, included any systematic attempts at measurement of psychological attributes relevant to athletes.

Psychological testing relies heavily on the use of self-adhesive paper and pencil tests. These tests are specifically designed for you as an athlete and focus on sport performance. Currently there is a broad range assessment instruments available. Tests measure individual attributes such as motivation, attention control, anxiety management, and mental readiness for competition. Psychological test profiling offers a useful set of hypotheses, which you can then evaluate, based on personal impression, as well as feedback from coaches and others. Once mental strengths and areas in need of improvement are identified, mental training programs to further enhance skills can be developed. Assessment of an entire team can provide a group profile that can be useful to the sport psychologist, coaches, and you, the athlete. Appropriate testing can indicate (a) cohesion levels, (b) leadership, (c) relationships of team members, and (d) communication channels within the team.

The wide array of psychological tests available provides you with a rich opportunity for careful assessment and measurement of the mental skills that are part of your successful performance. The uses of these tests are many and varied. The USFA Sport Psychology Test Profiling Protocol is presented in Appendix A.

Goal Setting

Before you go for the gold, you must first go for the goal. Goal setting is the foundation of personal achievement in sport and all of life's important experiences. Most goal setting begins with a dream goal: to medal in a national competition, to gain an international ranking, to make the USA Olympic team. In order to benefit from goal setting, you must accept the goal as your own. The goals that are set must follow a number of principles if they are to be effective. Goal setting principles are as follows:

- Link Performance Goals to Outcome Goal
- Set Challenging, But Realistic Goals
- Describe Goals in Language that is Positive and Specific
- Progress through Collaboration to Personalization
- Integrate Short-term, Intermediate, and Long-term Goals
- Use Regular Feedback to Adjust Goals
- Practice Self Acceptance

Link Performance Goals to Outcome Goals

Outcome goals focus on results, such as the score of a bout, final placing in a tournament or national ranking. In a head-to-head competitive sport like fencing, outcomes depend on the fencer's effort and skill, and the performance of the other competitor. Such outcomes are ultimately not within fencer's control. You could fence the best bout of your career and still lose, if the other fencer is better on that day. Wanting to win is not enough. You must know what to do in order to succeed. This is the role of performance goals. Physical condition, mental preparation, technical skills, and tactical sense are the foundation of fencing excellence. The development of these abilities through training is within your control, as is fencing within your own game plan during competition. Goal setting is about systematically building such skills through regular practice and applying these in competition.

Set Challenging, But Realistic Goals

The most common goal setting error is striving for results that are beyond your ability. Most of the time this is a psychological trap. When you fail to meet goals day after day, you may become discouraged. When goals are set unrealistically high, it is impossible to develop a sensible training program. In contrast, a realistic goal plan bolsters your motivation by creating a sense of progress and by paving a pathway to success. In order to do this, you need to be grounded by sensible goals for training and competition.

Sport psychologists O'Clock and Evans have developed a simple method for setting realistic competition goals called Interval Goal Setting (IGS). IGS utilizes a formula to compute a range of indicators of goal achievement.

Step 1: Find **A**, where A is the average over your last five performances.

Example: Fencer's last 5 NAC event finishes: 42, 22, 25, 37, 57

$$A = 36.6 = 37$$

Step 2: Find **PR**, where PR (personal record) is your best finish within the last five performances.

Example: PR = 22

Step 3: Find **D**, where D is the interval difference between the average and the best finish. $D = A - PR$.

Example: D = 37 - 22

$$D = 15$$

Step 4: Find **UB**, where UB is the upper interval boundary. $UB = PR - D$.

Example: UB = 22 - 15

$$UB = 7$$

A goal of “finishing 45th” is not challenging enough whereas a goal of “a medal” may be unrealistic at this time. This fencer should be pleased with his or her performance if it falls between the average (37th) and the personal record (22nd). An aggressive goal would fall between the personal record (22nd) and the upper boundary (7th), with finishes closer to the UB occurring under ideal circumstances in which the athlete performs flawlessly.

Describe Goals in Language that is Positive and Specific

The language of goal setting is quite important. By following certain guidelines in the goal setting process, the clarity and precision of goals is enhanced. As a general rule, objectives should be stated in a positive (versus negative) language. On many occasions negative (what “not to do”) goals backfire. What about the statement, “don’t choke!”? To the extent it plays into the your fears, “choking” becomes more likely. In a critical situation you may need to know what to do and to feel a sense of confidence that it can be done. In this situation, the use of negative language is probably the most common coaching error. Consider alternatives to the statement “don’t choke.” The statement “you can do it” is positive and potentially confidence building but provides no information about what to do. “Don’t fleche” provides specific information, but falls short of advising the athlete what action might be best. Alternatives like “wait for a counter attack” or “look for an opening in six” are generally more effective because they help focus athlete on what to do. Set specific mental training goals for practice. For example, you and your coach identify “refocusing after giving up a critical touch” as an aspect of your mental game that needs improvement. A worthwhile goal to develop and use is a positive affirmation after a touch that will keep you focused on the critical elements of the bout, provide encouragement, and give you specific instructions on how to proceed. Once you are comfortable with this training you can use it during competition. Find times that are comfortable for you and use the goal setting guidelines described here to help determine the length and nature of your mental practice.

Progress through Collaboration to Personalization

The coach guides athletes by helping them remain focused on the distant objectives as they negotiate the difficult twists and turns of training and competition. While true in all sports, this is especially so in fencing because of the close, personal contact between coach and athlete in lessons, and because of the reliance on the coach for tactical advice. For these reasons, goal setting must be a collaborative effort between the coach and you. Ultimately, you must have a sense of ownership for the goals set. No matter how sensible the goals and no matter how well planned out, if you do not embrace these goals as your own; they will sooner or later be left along the wayside.

Integrate Short-term, Intermediate, and Long-term Goals

In order to achieve competitive success, the athlete must establish short-term goals. In order to stay focused and energized, short-term, intermediate, and long-term goals must be integrated so that the way toward the final destination is clear, and so that today's goals feel connected to the distant goal. All athletes progress through stages, coming periodically to key points of reckoning. It is from these vantage points that progress to the destination can be assessed, and goals evaluated and revised. Virtually all sports move on a yearly cycle with training programs and competitive schedules set, completed, and reset. The yearly cycle with its related activities is the basis of long-term goal setting. In the Olympic family of sports the 4-year quadrennium further sets the energy and rhythm of training and competition. Yearly goals will be influenced by proximity of the Olympic year and by the athlete's level of progress. There is also a critical need to fill the gap between the long-term and short-term goals. Intermediate goals are like milestones. They help the athlete stay on course and help gauge progress.

Use Regular Feedback to Adjust Goals

Keeping a careful record of goals set and completed (e.g., a training log) is an excellent way to monitor your progress. Frequent evaluation will keep you from veering off course, help make adjustments as needed, and increase your confidence as you succeed. Coach evaluation and self-evaluation together enable the athlete to work smarter; the athlete knowing what feels right from the inside, and the coach bringing insights from his/her background. As the coach provides feedback, the athlete can find sustenance to continue working and improving in their sport. A successful goal setting program balances commitment and flexibility. Regular dialogue between coach and athlete about goals set, goals met and goals to come is the key to maintaining this balance.

Practice Self-Acceptance

There is no enduring success without the ability to accept the personal ups and downs that are an inevitable part of sports experience. So an implicit goal in sport learning to live well with winning and losing. Turning losing into learning and maintaining perspective in victory enables the athlete to sustain focus on the larger goals. Self-acceptance, the honest acknowledgement of personal strengths and weakness, is critical to this. This is in turn linked to setting goals that are realistic and personalized. With well-set goals, everyone can be a winner through the satisfaction of personal achievements and for the richness of their competitive experience.

The Cardinal Skills of Mental Training

The following sections will enable the reader to more fully understand the five cardinal skills of mental training. These skills are:

RELAXATION/ACTIVATION

CONCENTRATION

SELF-TALK

IMAGERY

PERFORMANCE ROUTINES

Peak performances are those rare moments when everything comes together for an athlete, both physically and mentally. The reason why you are reading this manual is probably to: (1) reach a new level or “peak” in your performance; (2) train in such a way as to increase the occurrence of your peak performances; or (3) learn how to consistently compete at your optimum level.

The main purpose for developing a mental training manual is seen in the axiom, “mind and body cannot be separated”. Following the work of Russian Sport Psychologist Yuri Hanin, this mental state is often referred to as the “zone”, short for “zone of optimal functioning”. Many athletes, over time, have expressed the characteristics they have experienced during peak performances. These include:

- A narrow focus of attention
- Feeling that the performance is effortless & automatic
- Complete control of mind & body
- A positive attitude & self-confidence
- No fear of failure
- Feeling totally relaxed

The five skills of mental training discussed in the manual are of an all-inclusive nature. Each is distinct and specific but in turn closely linked to the others. The language in this manual may differ from the terms that you are accustomed to using to

refer to the mental aspects of your game. However, as you read through these sections and apply them to your particular situation, realize that these words are simply a way to describe what the vast majority of athletes experience. Taking the skills discussed herein and employing them in a practical nature is the major emphasis behind this work.

Relaxation/Activation

The ability to be composed under pressure is a necessity. Most world-class athletes are nervous when they compete. The difference between those at the top and those lower levels is the way in which nervousness is managed. It is all right to have “butterflies in your stomach” as long as they are “flying in formation.” The top athletes treat performance anxiety as a friend. It is great to be excited about the opportunity to compete. However, when these butterflies start to interfere with the performance, it is crucial to have ways to gain control instantaneously.

Finding this balance between feeling overly-energized and overly-relaxed is a key concept in mental training. Understanding arousal and how it affects athletic performance must first be understood. A person’s level of arousal can be found anywhere on a continuum from extreme energy and vigor to no energy or motivation.

The inverted-U hypothesis (figure 1) posits that as arousal increases from drowsiness to alertness, there is a progressive increase in performance levels. On the other hand, when arousal continues to increase beyond alertness to over-excitement, the performance levels decrease significantly. So, what is the proper level of arousal? Your optimal level of arousal may shift to the right or left, based on your personality and coping style. This will vary from training to competition. In a competitive situation the answer lies within your fencing style, your level of fitness and your ability to maintain a positive focus. In critical performance situations the well trained (physically and mentally) athlete is better able to tolerate the elevating arousal level and may even draw extra energy from competitive pressure.

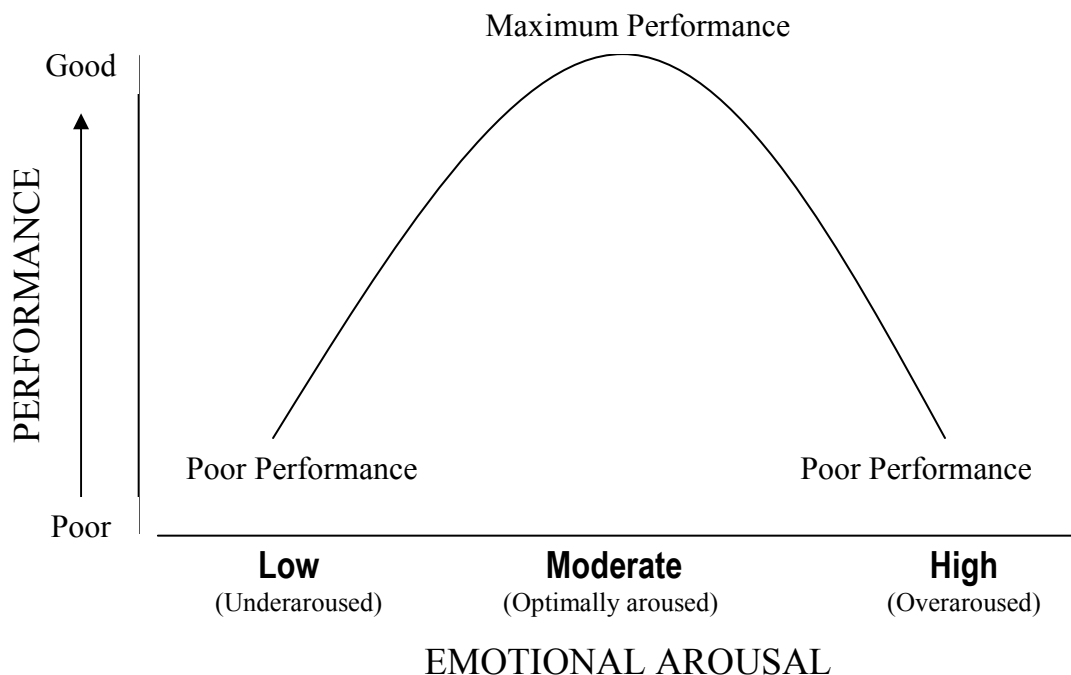


Figure 1: The Inverted-U relationship between arousal and performance

Relaxation

In order to relax in the midst of a stressful situation, sometimes the simplest method can bring about the best results. Breathing properly is a great place to start. Proper breathing comes from the diaphragm. Breathing from the chest and shoulder areas is often associated with increased muscular and mental tension. Once a relaxed breathing pattern is established, you can calm yourself even further by relaxing your muscles one group at a time. When proper breathing techniques are employed, a simple relaxation exercise to use is seen in figure 2. Techniques such as this are best learned in a quiet place, laying or sitting in a comfortable chair with your eyes closed. With practice, the same effect can be accomplished with your eyes opened in a busy, stressful environment.

This particular technique is designed so that the length of practice may vary. You can move through the exercise at a comfortable pace, taking plenty of time to modulate your breathing and moving slowly through the “1 to 10” count and perhaps even repeating it 2 or 3 times. After practicing this a few times you will remember the way the numbers match up with the part of your body you would like to relax. You may even consider creating a personal audio tape of this exercise using your own voice. After regular practice at a measured pace (5-15 minutes), you can practice moving through the “1 to 10” count quickly as a way of calming yourself in a situation where time is limited.

Please close your eyes. Turn your attention to your breathing. Be an observer to the process of your breathing. And notice the way in which you breathe. Is it deep or shallow? Regular or irregular? Let yourself come to a way of breathing that is deep, slow, and regular. You will find as you breathe in this way, you will quite naturally come to be comfortable, relaxed, and at ease. (Pause.) Now you will find that you may relax even further by focusing, in conjunction with your breathing, on the muscle groups of your body. In a moment you will begin to count slowly from “1 to 10” focusing your attention in order on the muscle groups of your body. Ready to begin? Breathe in, count “1” silently to yourself, focus your attention on the muscles in the abdomen, and when you breathe out let these muscles relax. (Repeat: 2-chest/ 3-back/ 4-hips and thighs/ 5-lower legs and feet/ 6-shoulders and upper arms/ 7-forearms and hands/ 8-shoulders, neck, in lower jaw/ 9-face and head/ 10-whole body.) Once again, turn your attention to your breathing and let it be comfortable, relaxed and at ease. (Pause.) Now count backward from “3” to “1” and open your eyes. When you open your eyes, allow yourself to remain relaxed and at ease.

Figure 2. Relaxation 1-10, by John Heil, D.A.

Relaxation can also be accomplished in a variety of other ways, for example: listening to quiet music, focusing on something not related to fencing, or finding a quiet place in the competition venue where you can retreat and settle your emotions.

Activation

Once athletes learn how to relax properly, they can begin to learn correct activation techniques. There are many variations and techniques on how to increase energy but the key to remember is when. The timing of athlete's activation is crucial for whether or not they reach their optimal level of arousal at the right moment. Some good activation exercises include listening to energizing music, reviewing competitive goals, and using imagery to imagine yourself competing against your next opponent. Breathing can also be used for arousal. The basic physiological concept here is that an increased rate of breathing will increase the athlete's heart rate. With increased arousal comes other changes in body chemistry that can create an "adrenaline surge". If these methods do not work, consider doing some "fast twitch" muscle work, like running quickly in place to elevate your heart rate.

Probably the most common method for increasing an athlete's activation level is a pep talk by the coach. A pep talk is a psyching-up strategy that is designed to increase your arousal and activation level. This may include personal challenges, stories, reasoning, and even silence. However, since the activation relies on the quality of the verbal communication, pep talks can prove to be unreliable a lot of the time, sometimes even overenergizing the athlete. Each athlete begins with a different initial level of arousal. Increasing arousal affects each athlete differently. Intervention procedures are best applied individually based on prior experience between the coach and the athlete. It is important that the athlete and coach take ample time during training to discuss which approaches work best to energize and focus the athlete. Like other training methods, this needs to be refined over time through the process of trial and error and continuing candid conversation between coach and athlete. Time out periods during direct elimination bouts are especially critical because there is so little time. The coach must prioritize whether presenting tactical information is most important - or alternately whether the athlete needs to be relaxed or energized, or simply a confidence boost.

Concentration

Concentration is able to focus on the right thing, in the right way, at the right time. You must focus your attention on the task at hand and to not be distracted by internal (thoughts, feelings) or external (noise and other distractions from the environment) stimuli. Correct concentration cannot be forced, but learned as an acquired skill where in you remain in the present time, not thinking about the past or future. Nideffer proposes a model of concentration that identifies focus dimensions.

Figure 3 illustrates these distinct attentional styles.

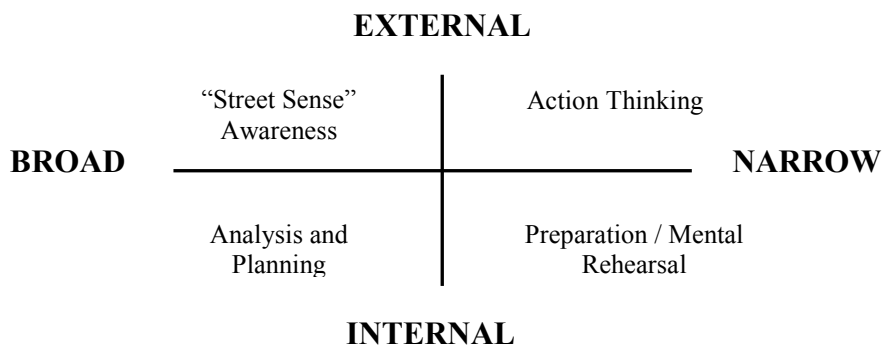


Figure 3. Dimension of Attention, Dr. Robert Nideffer

Learning to focus not only while fencing but also between touches and between bouts is paramount to good performance. It is competitive fencing that the habits of concentration are developed and really put to the test. It is important to have a game plan and to concentrate on your plan throughout a bout. If distractions occur, they must be put aside and focus regained in order to perform your best. For example, if you feel a director made a bad decision that cost you an important touch, it is too easy to waste valuable time feeling resentful or angry. While focusing on emotional reactions to such a situation, attention is diverted to the real issue at hand. The call went the wrong way so what can you do to see that the mistake is not repeated? Free your mind from outside pressures and focus on your performance, not on the outcome of a bout.

Proper concentrating can not be forced but comes through practice and experience. Following is an exercise, designed by Zealand (1995), to help you improve your concentration by changing your focus across varied dimensions.

Concentration Training

When practicing, athletes should make sure they are in a comfortable position.

1. For the next few minutes, take your self through the “Relaxation 1-10” exercise. Once you are fully relaxed, proceed to the next step.

2. Now listen to what you hear by taking each separate sound, identifying it, and then mentally labeling it, such as voices, footsteps, or a cough. Next, simultaneously attend to all the sound without attempting to identify or label them. You should listen to the mixture of sounds as you would music, while verbal thinking falls away.
3. Now become aware of bodily sensations such as the feeling of where the chair or floor supports your body. Mentally label each sensation as you notice it. Before moving on to another sensation, let each sensation linger for a moment while you examine it; consider its quality and its source. Next, feel all these sensations simultaneously without identifying or labeling any particular one. This compels you to go into the broadest possible internal body awareness.
4. Attend now only to your emotions or thoughts. Let each thought or emotion appear gently, without being forced. Identify the nature of your thoughts and feelings. Remain calm no matter how enjoyable or repulsive they may be. Feel one, then another, then another. Now try to tune into only one and hold your attention there.
5. Open your eyes and pick some object across the room directly in front of you. While looking ahead, see as much of the room and the objects in the room as your peripheral vision will allow. Simultaneously observe the entire room and all the items in it. Picture now a broad funnel into which your mind is moving. Centered in the middle of the funnel is the object directly across the room from you. Gradually narrow your focus by narrowing the funnel so the only thing at the small end of the funnel is the object across from you. Expand your focus little by little, widening the funnel until you can see everything in the room. Think of your external focus as a zoom lens; practice zooming in and out, narrowing or broadening your focus according to your wishes.

When practiced in its entirety, this method develops a versatile set of concentration skills that can be used in a wide variety of circumstances. Each of the components of this exercise may also be practiced individually, thereby building more specific focusing abilities. Variations on each of these components that apply specifically to the fencer follow. Look for the proper opportunity to try this first at your club or at a fencing competition.

#2. The specific concentration skill you practice with this method is broadening external awareness of your surroundings. This type of focus can be a great way to study and opponent. By forcing a broad focus, you may pick upon idiosyncrasies in that fencer's style, perhaps identifying gestures or movements that gives away the next action. Research shows that under stress most individuals experience visual "tunneling", that is, their visual field shrinks as they lose peripheral vision. By practicing broadening visual awareness you are better able to take in visual information and stay in tune with your environment. Alternately, letting the background create a kind of "white noise" effect can be a way of relaxing at one level while remaining connected to fencing at another.

#3. The concentration skill that is challenged by this technique is broadening internal body awareness. In the martial arts this is known as “grounding”. Some fencers feel stiff, awkward and distracted as they warm up, especially for an important bout. A strong and intense focus on the fundamentals of balance and movement can be a way of regaining a sense of mental and physical equilibrium. This in turn serves as a foundation on which to practice increasingly complex fencing actions. This method is especially useful to the fencers who are too much “into their heads” and need to shift back into their bodies to regain the feel of fencing. By slowing down the pace of your warm-up and your pre-competition plan, you can increase the intensity of your focus on whole body movements, fencing actions, and ultimately on feeling of being right with your body.

#4. This method of broadens internal awareness – but of thoughts and feelings (versus “body” awareness). Preparation for competition involves increasing the intensity of both physical and mental processes so that maximum effort can be out forth. It is important that the intensity level be just right for each athlete. Much of the time, the level of mental and physical energy is more than the athletes needs (remember the inverted-U concept in the Relaxation/Activation section). This can lead to excess mental and physical tension. At a purely mental level this may present itself as feelings and thought of self-doubt and fear of poor performance. If this type of mental process continues unchecked, it can result in a self-fulfilling prophecy of failure to perform up to one’s abilities. It is important to understand that negative thoughts and feelings at times are commonplace occurrence for most athletes. Try to accept these feelings as a part of the competitive experience. The mental awareness technique described above is a way of objectifying feelings and of gaining better control of them. By letting go of fear and doubt and blending with your feelings instead of fighting them, you can conserve mental energy and create a more positive focus.

#5. This method helps practice narrowing and broadening concentration on what is important, that is, focusing on the right thing in the right way at the right time. In the final analysis, narrowing your focus is the most critical mental skill for competitive success. This means being ready, willing and able to let go of everything else from personal worries to problems at work or school. It also means letting go of the last touch and thoughts of the outcome - to bring your total focus in the moment and on fencing one touch at a time. Samurai warriors trained this skill by staring at a spot on the wall for hours at a time, gaining control of eye and mind. You can adapt exercise #5 quite easily for use in a variety of circumstances including fencing. Try this first at practice until you are comfortable with it, and then use it in competition.

Collectively, the practice of this entire set of exercises teaches mental flexibility, that is the ability to shift from one style of focus to another. This is of critical importance because different tasks (for example, analysis of an opponent’s tactics, processing suggestions from your coach and actually competing) require different styles

of concentration. Under stress, the ability to shift as needed from one style of thinking to another is undermined. In other words, sometimes a fencer gets stuck in one type of focus (for example, if after a break in a DE bout you start fencing while still mulling over your coaches instructions, you will be at a great disadvantage). By specifically practicing shifting of attention from one type of focus to another, all concentration skills are enhanced and made more resistant to the effects of stress.

Self-Talk

Successful athletes are self-confident athletes. What you think or say about yourself in practice situation is critical to how you will perform. Self-talk can become a self fulfilling prophecy whether positive or negative. In a positive light, self-talk can facilitate performance and replace irrational thoughts with productive thoughts. Since all athletes can be a great aid in performance. This simply involves using key words or phrases to reinforce performance goals or to create a positive mental state.

Athletes can lose focus in competition by dwelling on their recent mistakes rather than their present performance. They may put themselves down (e.g., “That was a stupid move.”) and be discouraged (e.g. “I can’t win.”) decreasing confidence effort, and performance. Self-talk can be employed to help stay in the present. It can be used in conjunction with the methods discussed in the section on concentration. Affirmations can improve mood for the athlete by using key words to trigger positive emotional states. Similarly, positive self-talk can change moods from nonproductive to productive. For example, it can allow an athlete to turn the “energy of anger” into a productive form to facilitate performance. In addition, you can employ self-talk for maintaining your intensity to the end of a long direct elimination bout. In this sense, athletes are attempting to sustain performance by controlling factors that would prematurely end the effort. Self-talk can be employed in a variety of ways to manage worry. Four methods for managing worry include problem solving, thoughts saving, thought reviewing, and thought stopping.

Problem Solving

In this sense, problem solving is converting worry into production action. Uncertainty about how to solve problems can lead to procrastination, and cause a problem to turn into worry. When this happens, the athlete needs to make a commitment to deal with the problem head on. For each worry, create a list of possible solutions along with the pros and cons of each solution. This accomplishes two purposes. It breaks a larger problem down into smaller, more manageable parts and gives direction to make things different. If this does not move you toward a solution, seek advice from someone trustworthy. Some things in life cannot be changed. These need to be accepted. When this happens, it is important for you to be okay with yourself even though you are not able to solve the problem.

Thought Saving

Thought saving is taking a break from worry. Great athletes, artists, and scientists have learned that after working on a problem for a while you need to set it aside. The “Incubation Theory” suggests that at an unconscious level your mind can continue to work on a problem even as you go about other activities. When you train at fencing: you work then rest, work then rest. You need to do much the same thing with mental work. However, sometimes it can be very difficult to let a thought go. When

this occur, you may try saving your thoughts by writing them down on a piece of paper. You can return to them when you are refreshed, and ready to work and take up where you left off. This method is especially helpful at bedtime when you cannot sleep because you are preoccupied. Perhaps it is the night before a competition and you recollect some last-minute details you need to take care of. Rather than reminding yourself to remember to sleep, get up and write it down and go back to sleep.

Thought Review

Thought review can be viewed as managing expectations. As a competitive athlete, you will always be subject to the expectations of others including teammates, coaches, and parents. Do not let yourself be weighed down by someone else's expectations. Discard those you do not need and hold on to those that energize you. Realize that most expectations that you carry for others and are worthwhile are already yours to begin with – so there is nothing else you need to do with these. When distracted, refocus on the skills and attitudes that have helped you to be successful.

Thought Stopping

Thought stopping is used to shift quickly to a positive focus. Sometimes it is as if your logical side, which is striving to be positive and achieve competitive goals, is in conflict with your emotional side that has turned negative out of competitive anxiety or fear of poor performance. Thought stopping is a way for your logical side to talk to your emotional side so that your emotional side will truly understand. Thought stopping is a quick, intense technique for asserting your desire to excel and prevail over your worst fears. It serves as the foundation of a powerful three-step refocusing technique, which is described below.

1. STOP!!! Say it like you mean it, so that you can feel a reaction.
2. COMPOSE yourself with a smooth even breath deep into your diaphragm.
3. REFOCUS on a key fencing thought or action.

For example, imagine you are in between bouts and find yourself feeling uptight and tense with thoughts darting through your mind. You take a moment to mentally step back and look at your thoughts. As you do this, you become aware of negative thoughts like “What if I do not win this bout?”, “My next opponent is really strong”, “I don't know if I can win.” Each time a negative thought occurs you grow even more tight and tense. Next, you need to identify refocusing thoughts or ideas. For example, you decide to refocus by saying the word “confident” to yourself and then imagining executing a strong, precise fencing action that you feel will work against your opponent. Then, each time the thought occurs, you practice the technique.

The use of positive self-talk will improve your performance by managing worry and frustration, shifting from negative to positive emotional states, and helping you create a present focus. As such it builds self-confidence, helping you perform to your potential.

Imagery

Unless you can imagine success, chances are that it will not occur. Through imagery you can, in an instant, imagine any variety of sports skills that might take pages of written text to describe. Imagery methods rely on the creation of an “inner theater” where any of life’s dramas including sport performance may be played. Unlike physical practice, imagery can be utilized at any time and under any circumstances.

Imagery varies along several dimensions that are relevant to sport performance, including sensory-perceptual modality, perspective, speed, attentional focus, and mastery. These are presented in figure 4.

| |
|--|
| <p><u>Sensory-Perceptual Modality</u></p> <p>Visual Kinesthetic (position, balance, movement) Auditory (sound) Olfactory (smell) Gustatory (taste) Cutaneous (touch, temperature) Visceral-Emotional Pain</p> |
| <p><u>Perspective</u></p> <p>Internal (through one’s own eyes) External (a “camera eyes view”)</p> |
| <p><u>Speed</u></p> <p>Real-Time Slow Motion High-Speed</p> |
| <p><u>Attentional Focus</u></p> <p>Association (focus on performance) Dissociation (purposeful distraction from sport or performance cues)</p> |
| <p><u>Mastery</u></p> <p>Mastery (ideal performance) Coping (planned problem solving)</p> |

Figure 4. Imagery Variations

Often imagery is referred to as visualization, reflecting the dominant role of vision of vision in our sensory-perception experience of everyday living. In sport, the visual and kinesthetic senses are most closely linked to successful performance. However, there is an important role for the other sensory-perceptual modalities as well. For example, touch and sound may be used to create a more realistic scenario (e.g., the feel of your weapon in your hand; the sound of the scoring machine buzzing; the scraping of metal on metal); and may provide important performance cues (e.g., the rhythm of your opponents footwork; the tempo of the blade actions). Including a broad variety of sensory-perceptual modalities will help you set the stage in your “inner theater”.

In mental rehearsal you can adopt an internal (through ones own eyes) or external (a cameras eye view) perspective. It is generally assumed that the advantage of the internal perspective is that it puts you in better touch with the kinesthetic elements of your performance, and that the visual cues experienced most closely resemble those that would actually be seen in the sport environment. There are also potential advantages to be gained by adopting an external perspective. Sometimes the view from a different angle can provide a better sense of an opponents actions. Coaches are sometimes quite selective in where they choose to stand to watch a bout – why is this? Learning from videotapes of oneself or ones opponents requires working from an external perspective.

For most sports, an associative focus (attention directed to sport performance cues) is essential. However, at times purposeful distraction from some elements of competition can be helpful. For those athletes who experience persistent performance anxiety, it may be helpful to dissociate from crowd sounds or other crowd behavior. When fatigued or suffering a minor injury, the fencer can better focus on performance by dissociating from physical discomfort. At other times it is critical to have an athlete “tune in” on an injury to avoid aggravating it.

Altering the speed of imagery during rehearsal offers different possibilities. Real-time imagery helps with timing and coordination of complex skills. Slow-motion rehearsal is used for troubleshooting problems with techniques and for learning key sequences in new skills. For example, you may find it helpful to visualize practicing complex patterns of blade work in order to refine your game. High-speed imagery is beneficial for reviewing competition plans. This is something you can use just before your bout to help ready your self for the actions you anticipate using.

In mastery rehearsal, scenarios are imagined as happening according to plan. A mastery style rehearsal of skills or tactics aids mental preparation by focusing attention and building confidence. Coping rehearsal has the added advantage of helping you anticipate potential problems (e.g., distractions, negative emotions, performance errors) and to practicing refocusing following their occurrence.

While all your images will not fit neatly into categories, it is important to gain a better understanding of the variations of imagery and the role that these play in performance. Most athletes instinctively use imagery in one form or another. As with all sport skills, a strong knowledge of fundamentals is the foundation of skill development. Imagery rehearsal used in conjunction with physical training aids in learning new skills, maintaining and refining existing skills, troubleshooting performance problems, and simulating various fencing situations.

Accommodating individual differences, creating an “inner theater”, following progressive learning sequence, and generalizing from mental skills to performance skills enhances the effectiveness of imagery training. These guidelines are listed in figure 5.

| | |
|--|---|
| <p><u>Accommodate Individual Differences</u> Sport Skill Visual Imagery Skill Motivation for Imagery Training</p> | <p><u>Follow a Progressive Learning Sequence</u> Simple Imagery Precedes Complex Imagery Passive Imagery Precedes Action Imagery Slow paced Training Methods Precede Quick Methods Guided Practice Precedes Self-Directed Practice</p> |
| <p><u>Create an “Inner Theater”</u> Multisensory Imagery Personalized Imagery Relaxation Precedes Imagery Film/Video Models</p> | <p><u>Generalize From Mental Skill to Performance Skill</u> Mental Rehearsal of Sport Performance Use of Mental Skills During Training Use of Mental Skills During Competition Automatization</p> |

Figure 5. Guidelines for Imagery Training

Individual differences in sport skills, visual imagery ability, and motivation for intensive imagery training will determine the type of mental imagery program that is best suited to each athlete. The stage for this “inner theater” is set but the use of multisensory imagery, by personalized imagery, and by providing preliminary relaxation training. Skills (whether mental or physical) are best learned by attempting relatively simple tasks at first, and as these are mastered, moving on to more complex tasks. The ability to create effective imagery is improved through practice. As relaxation and imagery skills develop, the same mental tasks can be rehearsal time, making the use of brief imagery methods increasingly practical. The ability to use brief segments of imagery rehearsal at key moments in competition greatly enhance focusing skills. And it helps athletes stay fixed on the actions that they want to happen (instead of those they want to avoid). Positive imagery cannot guarantee a good result but it make it more likely. You will probably be most comfortable initially with guided imagery where your sport psychologist or coach functions as the “director” of the “inner theater.” However, the goal is to have yourself eventually function as both “director” and “lead actor.” This is accomplished by a gradual shift from guided to independent practice.

The ultimate test imagery training is how well it serves you in competition. Imagery will eventually need to be practiced in training and competitive situations. Eventually imagery (and other mental skills) should become instinctive or second nature, occurring almost automatically when needed. Consistent practice of imagery training provides an opportunity to develop skill and confidence so that the possibilities of performance can become reality.

Performance Routines

Performance routines are the stepping stone to maintaining focus under pressure. Performance is likely to be enhanced in an athlete when preparation becomes more systematic. These routines give you control over your external and internal environments. The more familiarity, routine, and structure you can have in your external environment, the easier it is for you to be in control of your internal environment. For example, the external environment can be stabilized by fencers starting their warm up at the same time before each bout, eating the same precompetition meal, and going through a mental preparation routine. Once the external environment is controlled, the internal environment can fall into line. This means monitoring and controlling your emotions so that the energy and focus for competition is reached at the right time.

The most effective routines are individualized, and will have some variation based on conditions. The routine should help the athlete focus on thoughts, feelings, and bodily sensations linked to successful performance. When this is done an athlete can make the necessary adjustments to reach his/her ideal performance state. A good place to start in developing your routine is to look at what you are already doing before competition. The best athletes in the world have well refined competition routines that help them maintain their psychological equilibrium under virtually any condition. Use performance routines in practice everyday so that they become second nature. As a general rule, be systematic in developing and implementing routines. Athletes should refine and revise performance routines to help build confidence in their ability to cope with setbacks or surprises. Below are some guidelines and techniques to use in developing and using performance routines.

PERFORMANCE ROUTINE GUIDELINES

All athletes have performance routines. Breakdowns in routines can come about because of poor performance or increased pressure and in turn lead to further decline in performance. Carefully planned and practiced routines enable you to be more mentally resilient and help maintain good performance under adversity. You should establish preset routines for competition including precompetition routines between bout routines and even between touch routines. “Between touches” and “between bout” routines contain the same key elements as all your performance routines. These elements are (1) an analysis of prior actions and planning for upcoming actions, and (2) refocusing, that is, being mentally ready to fence. The main difference relates to the amount of time available for the routine and the varying opportunities this presents. It will take some time for you to develop, if you do not already use, your own ideal performance routines. Once you have identified a definite routine, it should be consistently practiced. Eventually these routines will serve automatically to trigger your mental skills like concentration, relaxation, etc., for peak performance. General guidelines for competition follow.

PRECOMPETITION ROUTINES

- Other issues and concerns are set aside as the competition becomes the sole focus of your attention
- Sets the stage for competition
- Includes a gradual intensifying of mental and physical energy

Night Before: Know your goals; be confident you will do your best; enjoy yourself

Competition Day: Enjoy the excitement; refocus from distractions
Follow routines for dressing, equipment check, and warm-up

Ready to Fence:

Phase I – Mental Training (5-10 minutes)

1. Relax “1 to 10”
2. Energy check – Calm or energize, as needed
3. Inventory – Review competition strategy and goals
4. Preview Performance – Feel your weapon and see success

Phase II – Prepare Mind and Body

1. Take care of last minute needs
2. Observe other fencers
3. Adjust energy level – as needed
 - If tense or nervous
 - Easy stretching; calm breathing
 - Mental training – Relax “1 to 10”; Other relaxation techniques
 - If tired or sluggish
 - Fast twitch muscle work; quick breathing
 - Mental training – energizing music; Imagery to project yourself into competition
4. Focus on goals; refocus when distracted
 - “STOP!” distraction; feel you weapon and see success
5. Final preparation – energizing and focus on opponent
6. FENCE!

BETWEEN BOUT ROUTINES

- This controls the pacing and rhythm of the competition for you

- Adjust your routine according to the time available between (e.g. pool bouts versus DE bouts)
 - Modulate physical and mental energy so that you remain in top form as the day progresses
1. REVIEW – Efficient analysis. Use resources at your disposal (e.g., consult with coach). Avoid over analyzing.
 2. ADJUSTMENT – If needed in fencing tactics or mental state. Use time available for physical and mental recovery. Each fencer needs to identify which methods are helpful and under what circumstances they are best used.
 3. REFOCUS – Gradually shift to competition mindset
 4. “READY”

ADDITIONAL METHODS FOR UTILIZING TIMES BETWEEN BOUTS

1. Stay within yourself by going to a place where you can be quiet or alone and away from distraction – or, relax by spending some quiet time with a person you feel comfortable with.
2. Watch fencing bouts to support your teammates or to mentally prepare for upcoming bouts.
3. Decompress by distracting yourself for a limited time with something not related to Fencing.
4. Decompress and conserve energy by using relaxation techniques. Be sure to be re-energized for your next bout.
5. Use imagery to rehearse for success.
6. Remember important experiences that motivate and energize you and that intensify your commitment to your fencing goals.

BETWEEN TOUCH ROUTINES

- Be purposeful in the way you use time between touches
 - Work to control the tempo of the bout by controlling the tempo between touches to the extent the director allows
1. REVIEW – Quick analysis
 2. ADJUSTMENT – If needed
 - A. Fencing tactics
 - B. Mental readiness – composure
 - (1) If tight or anxious then mental training for calming (e.g., smooth diaphragmatic breathing, quick relaxation, etc.)
 - (2) If sluggish or tired then mental training to energize (e.g., rapid chest breathing, etc.)
 - (3) REFOCUS – Shift to competition mindset
 - (4) “READY” – When you say Ready – Be Ready!

Sport Psychology in Action

Comprehensive mental training programs will stress development of skills that are included in this manual. These skills will work in conjunction with each other and you will find yourself employing more than one skill at a time. Each skill complements another and is best utilized when this occurs. However, since so many composite applications can occur, it can be very difficult to integrate every component at all times.

A psychological skills training program, is best started in the off season or preseason. However, situational constraints may necessitate an introduction at any point in the season. During the off season, there is more time to learn new skills and there is no pressure to perform. Introducing a mental training program in midseason must be done with caution so that it does not interfere with the athlete's established routines and undermine performance.

Starting a program, such as this, with beginners requires a different approach than initiating a program with more experienced athletes. Early implementation ensures the establishment of a psychological skills foundation that will facilitate future athletic success. However, highly developed athletes can always benefit from psychological skills training. At this level, minute adjustments can mean the difference between winning and losing. The psychological skills should be integrated with the athlete's physical skills. This is the antecedent to practicing skills in a performance-specific manner. However, athletes must remember that learning and properly implementing psychological skills requires patience and consistency during practice. For example, the first mental skill discussed in the manual is relaxation. Once an athlete has effectively mastered the relaxation techniques in mental practice sessions, attempting to integrate these skills in physical practice, and eventually in competition should occur. Systematic integration through consistent rehearsal will result in the long-term success that most athletes and coaches are seeking.

Mental skills training is a collaborative process between athlete, coach, and sport psychologist. Ideally, a qualified sport psychologist should develop and administer the psychological skills program. However, with some training, the coach can work with the athlete on the development of mental skills taking this a step beyond what they coach might otherwise do. The empowerment of coaches and athletes to build mental skills to improve performance is the main goal of this manual. The coach's role is critical, meeting with the athlete on a day-to-day basis and working with the athlete more closely than the sport psychologist. In addition, the coach can provide the ongoing reinforcement that is needed to motivate athletes to maintain consistent practice. In the final analysis, success rests on the athlete's commitment.

Fencing is as much a mental game as it is physical. The fencer must have a keen, analytical mind to beat his/her opponent through decisive actions and strategic thinking. The proper use and integration of psychological skills is paramount to the fencer's success. Mental skills are no different than physical skills. Athletes who during practice allow their self-talk to be negative, their focus to be distracted, or their arousal level to be too low or high constantly find the same behaviors occurring during competition. However, if athletes are consistent in practice, prepare properly for competition, and are committed to excellence, the elusive peak performances can be more fully realized.

APPENDICES

APPENDIX A

United States Fencing Association Sport Psychology Test Profiling Protocol

GOAL

To provide an opportunity for fencers to assess their mental skills for competition and training. Recommendations are focused on developing concentration, managing competitive anxiety, mental preparation, and other issues of interest to the fencer.

PROCEDURE

1. **Initial Interview:** The process begins with a brief initial interview (usually by phone) with the sport psychologist. The purpose and procedures for the testing is reviewed. Typically, there will be some discussion with the fencer about his or her mental skills and competitive goals.
2. **Testing:** Testing will be mailed to the fencer, completed, and returned to sport Psychologist. Instructions for completing testing:
 - a. Try to complete testing in one sitting if possible. Set aside an hour or so and stay focused on the testing until it is completed.
 - b. Do the testing yourself and without distractions (for example, do not do it while you watch television)
 - c. Each test has its own instructions, they are self-explanatory.
 - d. Some questions will be difficult to answer. Try not to read too much into the questions. Usually, your first choice is your best choice.
3. **Consultation Interview:** The sport psychologist will review the results of testing with you (usually by phone). This will also be an opportunity to discuss with the sport psychologist your personal strengths as a fencer and the aspects of your mental game that you would like to develop.
4. **Athlete Report:** Following the phone consultation, you will receive a report that provides an overview of the psychological testing and a brief set of recommendations. You may be directed to selected resources (books, audiocassettes, CD-ROMS's) to help them with their mental training.

CONFIDENTIALITY

The sport psychology consultation report is held in a confidential file. No one has access to it without fencer's permission. The fencers are encouraged to share the results of testing with their coaches and others who may help them contribute to their performance. It is in this way that the hypotheses generated by testing, and recommendations offered for skill development are best assessed and implemented. Of course, the optimal use of these services is at the fencer's discretion.

For more information contact Dr. John Heil at 540-265-1605; 540-265-4214(fax); or jheil@rev.net.

Imagery Worksheet

PURPOSE: To understand how to construct an imagery rehearsal scenario.

PROCEDURE: Begin by thinking what situations would be useful to practice visualizing. A step-by-step guide follows.

1. Determine a competitive situation in which to use imagery rehearsal as a skill building technique.

2. Identify the general objectives and specific goals of mental practice. What skills are the focus of the imagery rehearsal?

3. Can the overall goal of imagery rehearsal scenario be addressed in a single imagery segment (like a brief film clip)? Or will two or more distinct segments be needed?

4. “Set the stage” by identifying and incorporating various scenario-perceptual modalities (visual, kinesthetic, auditory, etc.).

5. What are the key visual and kinesthetic elements that underlie the specific skills to be practiced in the visual rehearsal technique? How can these visual and kinesthetic elements be elaborated in detail to enrich the skill building experience?

6. What is the best speed at which to conduct this rehearsal technique? (Or should different segments be rehearsed at different speeds?)

7. Is a mastery or coping focus best for this particular exercise? (Or perhaps, is a combination of the two appropriate?)

Source References

Text for this training manual has been drawn from the following references with permission of the authors.

Heil, J & O'Connor, E. (1998). Go for the goal: Setting your sights on fencing success. American Fencing, 48 (2), pp. 8-10.

Heil, J (1997). Sport psychology in actions. American Fencing, 47 (3), pp. 6-7.

Heil, J (1996). Precompetition Guidelines. [Unpublished Script].

Heil, J (1996). Mental training to deal with distractions. American Fencing, 46 (2), pp. 12-13.

Heil, J (1996). Test Profiling: Measuring Mental Skills. American Fencing, 46 (4), pp. 32.

Heil, J (1995). Better fencing through technology. American Fencing, 45 (3), pp.5.

Heil, J (1995). Imagery. In K. Henschen & W Straub (Eds.), Sport psychology: An Analysis of athlete behavior (3rd ed.). Longmeadow, MA: Mouvement.

Heil, J (1984). Relaxation 1 to 10. [Unpublished Script].

Heil, J & Fonder, D. (1995). Race Preparation Plan. [Unpublished Script].

Heil, J & Gordon, R. (1996). The cardinal skills mental training. American Fencing, 46 (1), pp. 10-11.

Heil, J & Henschen, K. (1996). Assessment in sport and exercise psychology. In J.L. Van Raalte & B.W. Brewer (Eds.). Exploring sport and exercise Psychology. Longmeadow ,MA: Mouvement.

Zealand, C.T. (1995). Concentration Training. [Unpublished Script].

Additional Recommended Readings:

“Preparing the Mind” by Dr. Aladar Kogler, CounterParry Press.

“Pursuit of Excellence” by Dr. Terry Orlick, Human Kinetic Publishers.