

Maximizing Sporting Performance Psychological Principles for Clinicians

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ABSTRACT:

It is very common to hear a sporting champion acknowledging the contribution of his or her sports psychologist when making an acceptance speech at a major competition. On the other hand often the players who most need psychological assistance do not realize it. Instead, they are likely to blame other factor (e.g technique, fitness) for their poor performance.

KEYWORDS: Physiologist, Performance, Technique, Fitness, Competition.

INTRODUCTION:

Barriers to athletes using sports psychology counseling include negative perceptions of psychology and its values, lack of knowledge of sports psychology, and the challenges of psychologists integrating with players and coaching staff. The clinician who contributes to each of the problem or injury must be aware that psychological factors may contribute to each of the problems listed below;

PROBLEMS:

- *Inconsistency in performance*
- *Choking under pressure*
- *Personality clashes with players or officials*

- *Poor performance when traveling*
- *Diminishing performance as a season or tournament progress*
- *Failure to master a particular sports skill*
- *Failure to meet team goals*
- *Excess tiredness, recurrent illness/injury*
- *Domestic problems*
- *Substance abuse*

Advanced sports psychology for athlete performance is outside the scope of this topic. The purpose of the topic is to provide some background information for clinicians who work with teams and sportspeople regarding:

- Fundamental psychological skills that can improve sports performance
- Relaxation techniques
- How psychological skills can aid physical preparation for sports
- The role of a sports psychologist working with a sporting team.

Further references relating to the psychology of sports and rehabilitation are listed in the recommended reading. Psychological aspects of the rehabilitation process very important.

Fundamental psychological skills:

An athlete's psychological skill level determines whether tasks performed effortlessly at training can be reproduced in front of thousands of fans or under the scrutiny of a coach finalizing an Olympic squad. Even without training, successful athlete possess high levels of psychological skills. However, just as a technique training

can enhance motor skills, appropriate psychological training can often improve the consistency of an athlete's on- field performance.

Control of arousal level for optimal performance:

Performance_ the execution of skills in a competitive environment before an audience or judges_ is facilitated by the athlete being in the optimum psychological state. Athletes often describe the feelings of being in their optimum arousal zone as 'feeling in sync' or 'being in the flow.'

Variations from optimal arousal impair performance under arousal leads to inappropriate recognition of, and response to, on field cues. More often, an athlete's arousal level becomes excessive, leading to an increase in muscular tension and subsequent impairment of concentration, rhythm, coordination, timing and energy levels. Japanese elite athletes reported the optimal psychological state as one in which they felt relaxed self-confident, highly motivated and completely focused. These appear to be primary elements of an optimal experience.

Athletes seeking to achieve this state needs to: understand that the performance arousal relationship follows an inverted U curve

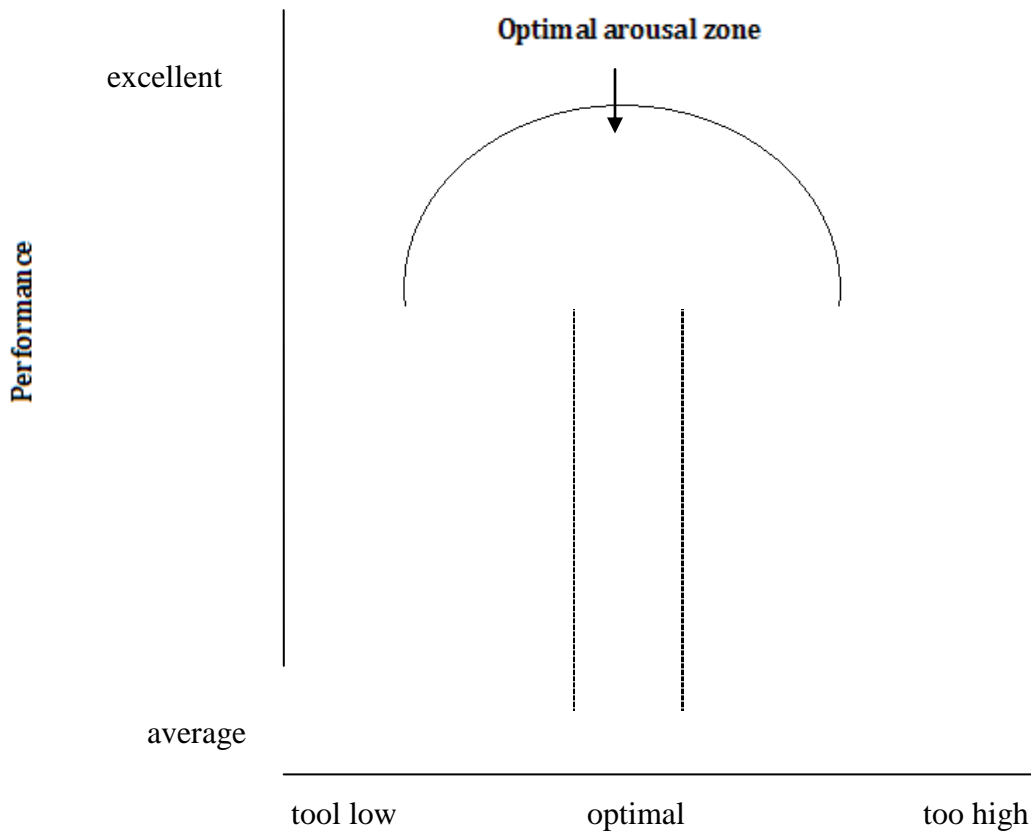


Figure 1.2 The negative cycle of decreasing performance and anxiety .

- Identify their peak performance state
- Develop a competition day routine
- Monitor their arousal level
- Master techniques that allow adjustment of arousal level in either direction (e.g mental imagery, progressive muscular relaxation, centering and positive self-talk)
- Recognize situation that disturb their arousal level during performance.

Mental imagery:

Mental imagery, also called mental rehearsal, is an experience that resembles sporting experience but occurs without the activity being performed .It is a mental skill that is useful in various situations. It may be used to modify arousal level, to enhance skill acquisition, to aid development of pre-

competition and competition routines and as a method of rehearsing other skills i.e. motor skills, behavior modification. Thus, it is a widely used technique for improving sporting performance.

Downhill skiers provide a good example of the use of mental imagery. They can be seen-eyes closed, hear moving from side to side-as they await clearance to begin their 'run' down the mountain. What they are doing is mentally rehearsing the act of skiing down the slope, shifting their body weight, changing direction smoothly, feeling the wind against their faces and flashing over the finish line.

As well as being used to enhance performance of 'closed skills' (when there are no variables other than the player and the ball, e.g. gymnastics, golf, serving at tennis), mental imagery can be used for 'open skills' where opponents influence the situation (e.g. track events, receiving serve).

Mental imagery can be used to develop coping strategies for sporting situation through a process known as 'stress inoculation'. Consider the tennis player who becomes so angry when he or she double faults at a crucial time of a match that the next two games are lost as well. The [player, through mental imagery, may recreate these

circumstances but mentally practice remaining in control of the situation by using a coping strategy such as cantering(see below)There are , however, potential dangers with this technique, which should only be introduced and controlled by a competent sports psychologist.

The danger lies in that the player may continue to mentally rehearse the double fault and inadvertently become pre-programmed to serve the double fault in the given set of circumstances .the sports psychologist must be sure that the athlete is competent at mental imagery, that the athlete knows how to use the copying strategy expertly and that the athlete focuses on 'successfully copying' and not on the anger in response to a double fault.

Like all skills, mental imagery requires specific practice. Each motor skill must be completed entirely and at competition speed. It must be positive and successful-the athlete must be aware of negative images and feelings but should never rehearse failure.

The effectiveness of mental imagery is enhanced by deep relaxation. Successfully mental imagers use as many senses as possible, such as hearing, feeling and smell, and not just sight. It would seem that mental imagery is more effective if the athlete is '

looking out' from within, as he or she would when performing, rather than being a spectator from the outside(as if watching him or herself on television), although the latter is still beneficial.

When should athletes use mental imagery?

Mental imagery should be used before practice sessions and depending on the sport, before and during competition. Mental imagery should be undertaken three to four times a week for about 10 minutes per day (two 5 minutes sessions) progressing to six to seven times per week during the last two weeks before the major competition. If the athlete performs mental imagery spontaneously, that is in the course of daily activities, without conscious attempts to do so, this should be encouraged. It is not advisable to perform mental imagery while trying to fall asleep the night before competition as imagery provokes an emotional state similar to that experienced in the competitive environment.

Progressive muscle relaxation:

There is numerous techniques to obtain muscle relaxation. One simple, effective method is called progressive muscle relaxation .This involves contracting and

relaxing specific muscle groups in turn. It teaches awareness of the feeling of relaxation to make the athlete more body aware .It increases the ability to switch concentration from one anatomical region to another. This prepares the mind for the task of switching to appropriate cues, as necessary during sports. when first learning progressive muscle relaxation, many different muscle groups need to be contracted. Once the skill has been acquired, the pattern of muscle contraction depends on the athlete's preference and the sport being played (e. g shoulders, neck and arms in a tennis player).

Centering:

Progressive muscular relaxation requires several minutes to perform but the psychologically skilled athlete can produce a similar efforts with a technique called centering that only requires a few seconds to perform. Thus centering can be useful during competition.

An athlete who has mastered centering can change his or her arousal level with one breath, but this requires practice. At first, the procedure may appear stilted and the instructions listed in the box opposite

excessively formal. However, with experience, the athlete develops a feel for centering and can incorporate it into the sporting routine, such as while learning on a golf buggy waiting for an opponent to tee-off, or sitting in the chair between sets of tennis.

The breathing exercise, if undertaken successfully, will induce an enhanced level of relaxation and change the focus of attention. By focusing attention, monitoring the movement of the abdominal muscles and subsequently transferring attention to a point in the environment (e.g. the ball in tennis), the negative cycle is broken.

One method to learn centering is for athletes to practice for 3 minutes at a time for a total of 30 minutes a day and begin and completing sets of three long deep breathes. At first athletes may experience difficulty totally focusing their attention on monitoring abdominal movement. This, however, is critical and develops with practice. After a short time an athlete should be able to induce the desired effects by just taking one breath.

As athletes become more skilled at adjusting their arousal levels, they can use the technique less often. This is a sign of progress. By having a method whereby he or

she can control anxiety, the athlete automatically tends to reduce anxiety.

Routine:

Routine prepares the athlete mentally and physically for training or performance. Adopting specific prevent routines improves consistency of performance, Routines are also useful in performing specific skills.

Routines for preparing for competition:

Routines provide an overall structure for the athlete in the lead-up to competition and they can help put the player in optimum arousal zone. The athlete must have the flexibility to modify the routine by adding to, or subtracting from, as competition schedules demand. Competition routine might begin two nights before competition and continue to several hours after the events.

Procedure for centering:

1. Sit in a comfortable chair.
2. To release muscular tension in the face, smile slightly so that the lips are apart.
3. Flick the arm and control the head slightly, attempting to consciously relax the arm and neck muscles.

4. Close the eyes and drop the chin towards the chest.

5. (a) Take a long deep breath using the diaphragm. There should be minimal chest movement and absolutely no hunching or rising of the shoulders. Breathe in through the nose and out through the mouth. Do not take a deep breath expanding the lungs chest as this further increase the muscular tension that is already present in the shoulder region because of anxiety.

(b) While inhaling and exhaling, it is imperative that thoughts are focused on the movement of the abdominal muscles. Aim to monitor this movement to the exclusion of all else.

(c) As you exhale, 'let yourself go', that is allow the muscles to relax. You will know if you have been successful in this phase if you feel a release of muscular tension.

6. Repeat the technique three times. (If thoughts flash through your mind while taking a breath it should not be regarded as a successful breath and must be repeated).

7. After completion of the breathing exercise, it is important to immediately focus your attention on the most critical of the environment for example, the ball or the target.

Routines for performing skills:

Routines can also be used to enhance the performance of closed skills. A pitcher in baseball or softball (or a bowler in cricket) may have his or her routines disrupted. If the pitcher does not return to the key starting point in the routine, it is likely that the next pitch will not be productive. One practical and highly successful way of providing such athletes with feedback and reinforcing the need to re-start routing is with the use of transceivers between the coach and athlete.

Positive self talk:

Positive self talk can assist an athlete to focus and obtain an optimum arousal level. Training for positive self talk involves eradication of inappropriate thoughts, such as 'I can't get this shot', 'I never play well against Lauren', and replacing these with positive thoughts and words that reflect an appropriate focus on cues. In using positive self talk, the player draws on past positive experiences, such as 'I've been here before; I know I can do it, focus on the job at hand'.

One way of teaching self talk is with the aid of modern transceiver technology. By providing the athlete with a wireless ear piece, the sports psychologist can provide feedback to the athlete via the transceiver

unit without compromising the integrity of the competitive environment.

Although some devices allow the athlete and psychologist to communicate via transceivers, we believe that one way

After _ two days prior to first competition

5:00 p.m light training

6:30 p.m Evening meal- high carbohydrate, plenty of fluid

9:00 p.m sleep

Day before competition

7:00 a.m wake up

8:00 a.m light training- consisting only of the warm up routine

9:30 a.m breakfast

10:30 a.m massage

12:30 p.m lunch, relax by TV, short walk, chatting with friends, sleep

4:30 p.m mental imagery routine

5:00 p.m light training-consisting only of the warm up routine

6:30 p.m evening meal

8:00 p.m stretching routine

9:00 p.m sleep

Competition day (heats in morning, finals at night)

6:00 a.m Early rise (always rise at least 3 hours before reaching) shower

messages from the sports psychologist are generally the most helpful way of using this new technology.

Routine for preparation for competition for a swimmer on consecutive days

And stretch

6:30 a.m Breakfast: pre event meal

7: 00 a.m Travel to venue to arrive at least 1^{1/2} hours prior to race,

Listening to music on I pod on the way

7:30 a.m Get chanced, stretch, pre-event massage

8:10 a.m warm up in pool

8:30 a.m Report to marshal area-mental imagery during this time

8:55 a.m Introductions

9:00 a.m Race

9:10 a.m Cool down in pool

9:30 a.m Carbohydrates replacement-supplement

10:00 a.m Post event massage

10:30 a.m Return to hotel/home

11:00 a.m Relax, sleep

2:00 p.m Lunch (pre race meal) relax, may sleep (maximum 90 minutes)

4:30 p.m Travel to venue to arrive at least 1^{1/2} hours prior to race, listening

To music on I pod on the way

5:30 p.m Get changed, stretch, pre event massage

6:10 p.m warm up in a pool

6:30 p.m Report to the marshal area- mental imagery during this time

6:55 p.m Introduction

7:00 p.m	Race
7:10 p.m	Warm down in diving pool
7:30 p.m	Carbohydrate replacement- supplement
8:00 p.m	Post event massage
9:00 p.m	Sleep

When an athlete uses the transceiver, the sports psychologist can provide feedback regarding the quality of concentration intensity, use of centering techniques, between point (pitch) routines, variations in emotional level, rhythm of the context and so on. This is done is the natural breaks in the practice (i.e. between points in a tennis match, between pitches in baseball/softball).

In clinical practice, excellent results occur when positive self talk is enhanced with consistent feedback to the player at appropriate times, particularly if the player is not inclined to provide such reinforcement. After relatively short period players begin to look for the reinforcement and soon after start to positively reinforce themselves.

Routine for shooting foul shots:

- Whistle goes to signal foul.
- Walks to the foul line.

- Focuses on a spot on the ring (the same spot each time).
- Rehearses the movement without the ball.
- Receives the ball, bounces it four times while bent forward.
- Stands up straight, breathes in, and relaxes the shoulders.
- Breathes out, shoots the ball, and follows through.

Goal setting:

Athletes often have conflicting goals that must be prioritized. Because of time constraints, they need to list specifically what is being attempted and plan long, medium and short term goals.

They may be some outcome oriented goals (e.g to make the Olympic team) but these goals are usually supported by specific, shorter term , task oriented goals (i.e to be able to press 150 kg by July, to run sub 10.2 seconds 100m by August). These specific

tasks are activities over which the athlete feels he or she has direct control. If short term, task oriented goals are met, then longer term goals should fall into place. Each different aspect of training (e.g. nutrition, strength, skill, psychological) needs goals, as do off field factors such as schooling, career or family.

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