



Category: Psychological Training



PSYCHOLOGICAL TRAINING

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ABSTRACT

Sport psychology is an interdisciplinary science that draws on knowledge from many related fields including biomechanics, physiology, kinesiology and psychology. It involves the study of how psychological factors affect performance and how participation in sport and exercise affect psychological and physical factors. In addition to instruction and training of psychological skills for performance improvement, applied sport psychology may include work with athletes, coaches, and parents regarding injury, rehabilitation, communication, team building, and career transitions.

The birth of sports psychology in Europe happened largely in Germany. The first sports psychology laboratory was founded by Dr. Carl Diem in Berlin, in the early 1920s. The early years of sport psychology were also highlighted by the formation of the Deutsche Hochschule für Leibesübungen by Robert Werner Schulte in 1920. The lab measured physical abilities and aptitude in sport, and in 1921, Schulte published *Body and Mind in Sport*. In Russia, sport psychology experiments began as early as 1925 at institutes of physical culture in Moscow and Leningrad, and formal sport psychology departments were formed around 1930. However, it was a bit later during the Cold War period (1946-1989) that numerous sport science programs were formed, due to the military competitiveness between the Soviet Union and the United States, and as a result of attempts to increase the Olympic medal numbers. The Americans felt that their sport performances were inadequate and very disappointing compared to the ones of the Soviets, so this led them to invest more in the methods that could ameliorate their athlete's performance, and made them have a greater interest on the subject. The advancement of sports psychology was more deliberate in the Soviet Union and the Eastern countries, due to the creation of sports institutes where sports psychologists played an important role.

Athletes and coaches always think they must only practice longer and harder - they are reluctant to include psychological tools in their training and performance regime.

To be a better athlete does not necessarily mean that you must train harder or longer. It could mean that you need to address all the components that make up a successful athletic performance - mental as well as physical. Since you do not enter into competition with a completely empty head, you must include mental skills in your training and conditioning programmes as well. This will enable you to develop the strategies which will prepare you to enter a competition with the "proper mindset"

If you are interested in getting the most of your athletic endeavors, you can no longer treat your performance as a combination of isolated factors which come together in some mysterious and unified way on the day of the competition. A long distance athlete would never think to enter a long distance race without spending time physically preparing the body to meet the conditioning demands of a race. Yet, most athletes probably enter a race without determining what psychological skills he or she would need to help achieve the best physical performance. Almost no one prepares and practices the necessary mental conditions.



As the science of sport performance evolves, it becomes increasingly important to integrate the mental and physical aspect of performance. Traditionally, no attention has been given to the cognitive aspects of performance. Coaches and athletes have devoted most of their attention to the physical components of performance.

Introduction

Psychological Training is an individually designed combination of methods selected to attain psychological needs. There is no single idyllic Psychological Training package, each program must be individualized based on the psychological state of the individual and, the sport. To assemble a successful Psychological Training program it is important to distinguish between skills and methods. Psychological Training skills are the psychological qualities or attributes that need to be developed confidence, concentration. Psychological Training is the tool that will be used to help improve the skills. Thelwell and Greenlees argue that when implementing a Psychological Training program, it is improbable that a single method will be employed by a sports psychologist. They are high lightened that it is more effective to employ a combination of mental skills that relate to the specific sport.

Gymnastics/ Games/Sports

Men's artistic gymnastics/games/sports is competition on which the athlete must perform on a total of six pieces of apparatus; these include vault, high bar, parallel bars, rings, pommel horse and floor. During major competitions such as the commonwealth games the athlete must perform three pieces on two consecutive days. The athletes are given a score out of 10 for their performance on each piece. Athlete score more marks for more difficult sequences and less for easier routines. For each apparatus the athlete is scored based on: difficulty of routine, composure, timing, combination of movements and execution of movements.

Psychologists are noted that the effectiveness of Psychological Training is positive within sports of all natures. So many psychologists said 10% improvement in the bars, beam, and floor when compared to the control group. The Psychological Training program used by Fournier consisted of a five step intervention using relaxation, self-talk, goal setting, focusing and visualisation. Fournier also said that imagery and relaxation were the most effective methods utilised.

Self Confidence

Self-confidence may be the most critical self-perception in sport psychology. Self-confidence is defined as a global and stable characteristic which, in reality bares little use within the sports domain. The athlete must be confident they can perform well when placed in their competitive environment, i.e. Tiger Woods would be confident of making the final putt on the 18th green at Augusta in the Golf Masters, however, may not feel too confident taking the final penalty kick in the World Cup final. Self-efficacy is a situation form of self-confidence or the belief that one is confident and can perform within a specific situation. Psychologists suggest that the most consistent difference between elite and less successful performance is that elite athlete possess greater levels of self efficacy.

Self-Efficacy

Theories Bandura stipulates that self-efficacy is directly related to athletic performance. Increases in self-efficacy are mirrored by improvements in performance. Subsequently decreases in performance limit both performance and training. Prior experiences effect efficacy expectations, the probability performing to a high standard is much greater if you believe in your abilities, therefore efficacy has tremendous explanatory power when comparing fluctuations in performance.

Self efficacy is very important in a sport like gymnastics; the performer must believe they can perform well at the required time. Efficacy can fluctuated between apparatus; therefore within gymnastics it is important to increase self-efficacy for each piece of apparatus. Initially low levels of self-efficacy may transfer form piece to piece and negatively influence the whole performance. Therefore, initially high levels of efficacy



will improve performance and should be maintained throughout the duration of the competition. As with many psychological components rarely does a single component work in isolation. Decreases in self-efficacy could alter important performance variables such as arousal, stress and anxiety which may have a snowballing effect on performance.

Emotions

Emotion in sport is much more than a reactive expression to victory or defeat. Sports scientists have argued that pre-competitive and competitive emotional states can influence the athlete's ability to perform. Emotion is not a single construct; it can be sub-divided into emotional components. Psychologists said that a wide range of emotions are associated by changes in performance. Many athletes report that heightening levels of arousal facilitates their performance. It is reported to increase anaerobic power. However, emotions can have a negative effect on some motor skills through increasing muscular tension which ultimately effect co-ordination both detrimental to a sport like gymnastics.

Arousal

Arousal is referred to as a unitary construct that embraces both the psychological and physiological energetic systems. Landers and Boutcher (1998) define arousal as an energizing function that is responsible for harnessing the body's resources for intense and vigorous activity. Arousal is perceived to vary along a continuum which runs from 'deep sleep' to extreme excitement. Arousal can be measured using self-report questionnaires such as the Thayer (1967) Activation-Deactivation Check-list. Arousal can also be measured using simple physiological tests; heart-rate, blood pressure, respiration rate and biochemical indicants such as; epinephrine or adrenaline.

Anxiety

Martens and Horn advocates levels of anxiety result from an objective demand interpreted as threatening by an individual. Psychologists highlights that anxiety is viewed as feelings of nervousness and tension, which is linearly associated with levels of arousal. Anxiety can be further sub-divided into somatic and cognitive anxieties. Somatic anxiety refers to the bodily symptoms of autonomic reactivity; butterflies, sweating, increased heart-rate and shaking. Cognitive anxiety refers to the negative concerns about performance, lack of concentration and poor attention (Horn, 2002). Levels of anxiety can affect athletes individually, there not a single optimal level of anxiety, the effects of anxiety on performance is largely attributable to whether the athlete perceives anxiety to be facilitating or debilitating.

Stress

Stress can be described as both an environmental variable and an emotional response to a specific situation. Much like anxiety, the effects of stress on performance is down to how the athlete perceives this stress. So many psychologists highlighted that not all stress is negative, eustress (good stress) and distress (bad stress). Environmental stresses often deemed as distresses are somewhat unavoidable unpredictable, therefore the sports psychologist has very little control over their effects on performance. Emotional stresses however, can be improved, the athlete can be thought how to better 'cope' with stresses where they may perceive an imbalance between the demands of the situation and his or her response capabilities.

The Psychological Training Program

The Psychological Training program will focus on optimising performance by improving self-efficacy and emotional control. To improve these psychological skills, the athlete will complete sessions using goal setting, imagery and relaxation. The program will follow an educational approach as advised by psychologists . The program consists of three main phases: Educational Phase - developing the understanding and importance of Psychological Training and how it can affect performance. Acquisition Phase - Athletes learn how to use Psychological Training methods and how best to implement them. Practice Phase - devote time and effort to Psychological Training and complete training in both competition and practice. Psychologists said that four



gymnasts out of nine improved on the vault by 10% and seven out of nine on the asymmetrical bars improved by 10%. These findings support the use of PST programs to optimise performance within gymnastics.

Goal Setting Sessions

The first mental skill to be used within the program is goal setting. To fully educate the athlete on how goals should be implemented, both short and long term goals will be discussed. The athlete will be informed of the benefits of setting 'smarter' goals, and will be educated on the use of outcome, process and performance goals. The coach will be fully involved in the goal setting process, especially when process goals are used, the coach will provide the relevant technical information and needs analysis for each piece of apparatus. The athlete will be set goals to; perfect each individual piece of equipment (process goal), win minor practice competitions (outcome goal) and to achieve a point boundary for competitions (performance goals).

Imagery Sessions

The imagery sessions will incorporate internal (imagination) and external (video demonstration) of performances. All sessions will focus solely on optimal performances, participant will be encouraged to use imagery in real time and in slow motion, slow motion imagery will be encouraged especially when there is a certain technique which the athlete is performing incorrectly, this will allow them to imagine performing the skill correctly employing all the teaching points. The athlete will be encouraged to develop a competition-specific session. This session will be practiced intensely prior to and during competition.

Relaxation Sessions

The third mental skill to be employed throughout the PT program is relaxation. This will be delivered via a three-stage approach. The first stage which will focus on the use of Progressive Muscular Relaxation (PMR) this allows the athlete to feel what it is like to be completely relaxed and free from the aforementioned muscular tension (Gill, 2000). The athlete will be asked to practice the Centring technique which helps control breathing. This will be performed while the athlete is warming up for training sessions so that it becomes habitual when they warm-up for a major competition. Once these skill have been perfected participants will be asked to monitor their own tension levels pre and post relaxation sessions by responding to verbal descriptors, the athlete must scale their feeling from 0 (very tense) to 10 (very relaxed). Such a strategy will allow the athlete to be aware of their tension levels (self-reliant), and subsequently employ PMR or centring to reduce high levels of anxiety.

Rationale for Goal Setting

Bandura 'performance accomplishment' is the most effective method for improving self-efficacy. The most commonly used tool used by sports psychologists is goal setting. Setting goals provides this focus and directed attention by agreeing a timed end point to their action. Researchers and practitioners in both sports and organizational literatures have argued that a combination of both short term and long term goals is most effective for improving performance and changing behaviour, short term goals should be enforced to directly reach the long term goal of the client/performer.

Rationale for Imagery

Bandura 'vicarious experiences' is the second most powerful technique to improve self-efficacy. The tools utilised sports psychologists to promote these vicarious experiences are imagery and observation, psychologists suggests that motivational general-mastery a form of imagery which focuses on effective coping and mastery of challenging situations, is most effective for improving self-efficacy.

Imagery techniques have been used within clinical psychology to induce relaxation this technique helped maintain composure during competition. Martin, Moritz and Hall suggested that imagery which focuses on feelings such as relaxation, stress, arousal and anxiety could be used as an effective tool to control



emotions. In addition to using imagery to regulate anxiety, athletes can also use imagery within practice to pre-plan and rehearse their emotional responses prior to competition.

Rationale for Relaxation

As previously mentioned high levels of somatic and cognitive anxiety are detrimental to performance, within a sport such as gymnastics, where movements have to be executed with finesse and composure excessive anxiety will undoubtedly hinder performance. Athletes in closed skill sports (such as gymnastics) report more concerns about anxiety management than other athletes. Relaxation is often cited as the most important skills to learn. The ability for an athlete to control anxiety can be the difference between good and poor performance, within gymnastics it is vital that the athlete can overcome the debilitating effects of anxiety.

Relaxation not only improves emotional control within athletes, according to Bandura 'emotional control' directly affects the self-efficacy of the athlete. Although relaxation and energizing techniques are classified as the fourth most useful tool for improving self-efficacy (See figure 1), relaxation techniques were incorporated within the PST program for the positive effect on anxiety control.

Monitoring PST Program

Assessing the progression of the athlete during a PST program is essential. The two main psychological skills which will be improved within this program are anxiety and self-confidence. Anxiety levels and self-confidence will be measured using the CSAI-2-R. To help understand the mood state of the athlete the Positive and Negative Affect Schedule will also form part of the assessment.

Time and Implementation

Throughout the Educational and Acquisition phases the athlete will be required to spend increased time with the sports psychologist. When developing new psychological skills there performer and psychologist must work together to ensure techniques such as goal setting and imagery can be fully effective in optimizing performance. Once in the Practice phase of the PST the psychologist and athlete can reduce the time and frequency of sessions. Therefore the Educational and Acquisition phases of the PST will be completed during the off season/pre-season when physical training time sand frequency is low. Sessions within the practice phase can be reduced to 15-30 minutes for 3-4 sessions per week in some instances.

Conclusion

Research suggests that mental practice is as important as physical practice when trying to enhance a skill; the present PST program will enhance performance by optimizing psychological variables related to performance. Self-confidence and Anxiety will be the main focus of the skills to be improved. A combination of goal setting, imagery and relaxation techniques will allow the athlete to optimize their performance in games and sports. Problems when implementing this program may include:

The educational phase is the most important phase to reduce such problems. Once the athlete understands the benefits of sports psychology they will allow the time and dedication required to complete Psychological training sessions.

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