Assessment of team and individual game performances in sports

■ **YUWRAJ SHRIVASTAVA**

Author for Correspondence :

YUWRAJ SHRIVASTAVA

Department of Physical Education,
Dr. C.V. Raman University,
BILASPUR (C.G.) INDIA

■ **ABSTRACT**

Sport psychology is a buzz word today. The pioneers in this field, through multi-disciplinary approach, have tried to understand the complex functions of the mind related to various atheletic contexts and harness its great powers for improving athletic powess of man. As a recent discovery in the spectacular galaxy of behavioural sciences, sport psychology has become the very nerve-centre of atheletic activity and "involves the connection between the mind and the body and the utilization of this connection for enhancing atheletic performance as sprague pointed out. In this paper assessment has the potential to provide councils with a powerful planning tool, supporting effective usage and management of performances in team and individual games in their sports fields.

■ *Key Words* : Sports psychology athlete, Visual tracking, Reflex time, Directional perceptions anxiety athlete performance

■ *How to cite this paper* : Shrivastava, Yuwraj (2012). Assessment of team and individual game performances in sports. *Internat. J. Phy. Edu.*, **5** (1) : 85-88.

Sport psychology is a buzz word today. It is a scientific discipline with rapidly expanding horizons. The pioneers in this field, through multi-disciplinary approach, have tried to understand the complex functions of the mind related to various atheletic contexts and harness, its great powers for improving atheletic prowess of man. As a recent discovery in the spectacular galaxy of behavioural sciences, sport psychology has become the svery nerve-centre of atheletic activity and "involves the connection between the mind and the body and the utilization of this connection for enhancing the atheletic performance as Sprague pointed out. In his view, "emphasis is placed on understanding the psychological and physiological parmeters which thee athlete can utilize to enhance his/her performance 'In simple words, sport psychology attempts to maximize atheletic performance by tapping into both the physical and psychological domains of the individual.

Sportsw performance and psychology :

– The study of psychological and mental factors that influence and are influenced by participation and performance in sport, exercise, and physical activity and the application of the knowledge gained through thues study to everyday setting".

Sport psychology is a dazzling reality of our times and of modern sport; it is a science that governs the quality of a performance on the atheletic track, in the swimming pool, in the gymnastic hall, in the shooting range, or on the playfields of hockey, handball, basketball or soccer. The Canadian Sport Psychology Association has put up a very comprehensive and realistic perspective in their definition of sport psychology.

An elite athlete is a rare combination of talent, perspiration (hard work) and the right kind of psychological profile. In sports today, every one knows the best training methods, has access to the best facilities and most nutritional foods. Often the difference between the good and the elite is in the mental qualities of athletes, which the science of sport psychology, when co-acting with innovative coaching techniques, attempts to highlight, and develop affording optimal opportunities for every athlete to exhibit his potential notwithstanding his/her genetic limits and limitations.

Responsible factors for high performances :

"Within the constraints of his or her ability, an athlete's performance is significantly related to his or her psychological functioning" (Mahoney *et al.,* (1983).Looking at the wide range of atheletic events and sport activities and the specific requirements attached with each one of them in terms of "mental qualities that distinguish between the good and the elite athlete" (Young, 1998) , it has not beren a cakewalk for the psychologists to pinpoint with dead accuracy and utmost precision the content of psychological skill training for each category or class of sportspersons, because "athletes vary significantly in their psychological needs and how they respond to different approaches and intervention at enhancing performance .'' (Jones, 1993; Krane, 1993). However , based on their knowledge, understanding, experience, and training, psychologists (such as Wenberg, 1988) put up a sound conceptual framework and selected applications of psychological skill training after identifying the general psychological skill training after identifying the general psychological dimensions of sport and physical activity, which, broadly included:

– Visualization of the nature of competition (cognitive appraisal, common consequences of winning and losing),
– Goal-setting (beliefs, applications to physical activity),
– Self-confidence,
– Mental practice (benefits, application to physical activity,
– Cognitive restructuring (negative thought-stopping, positive affirmations),
– Relaxation stress management (cognitive techniques, somatic techniques);
– Concentration (intentional focus, improving concentration) and
– Visualization (vividness, controllability).

Regardless of the sport they play, elite athletes are not only able to survive and rebound from performance errors, but also learn from every experience (they had had) in a way that seems to facilitate further improvement. Exceptional athletes are seldom strangers to errors, suboptimal performance, and defeat, the athlete who learns to recover or "rebound" from small and large disappointments is in a much better position to improve his or her rate of progress.

Confidence :

Confidence is an emotion or a state of mind (Young, 1998) commonly associated with success in any Endeavour in life including sport. It is defined "as how strongly athletes believe in their ability to learn or execute a skill, compete at a certain level, succeed in competition".

Concentration :

In general, to concentrate is to 'focus all one's attention on something' from the viewpoint of sporting context, it is defined as the ability of the athlete to focus on performance-relevant aspects of the intentional field (Taylor, 1994).

Performance anxiety :

The relationship between anxiety and performance in sporting context has been known for a long time; especially on account of the implications it has for practical issues in training, coaching and competition. Stories abound of athletes (or teams) that performed poorly because they underestimated their opponent (below optimum anxiety levels).

Positive attitude and will :

Positive mental attitude may be reflected in a wide range of individual behaviours. Its essence seems to involve a process of self-encouragement almost irrespective of the content and /or quality of performance. In other words, an athlete who appears to be "positive" in his or her approach to trainings and competition may actually feel frequent lapses and deficits in self-confidence. In these circumstances, what is impotents is the intent to persevere, improve and do his/her best in each situation. This is where the concept of "will" may be invaluable. Although it is a vague and poorly researched concept in psychology, there is little doubt that it has substantial practical relevance for atheletic competition (as well as life in general).

A strong dedication and commitment to optimal performance and personal improvement are probably fundamental to any serious athlete. What may be less fully appreciated is the extent to which these crucial factors are themselves dependent upon day-to-day application and exercise. Attitudes and self-reaction patterns are strengthened by mental "exercises" and focal attention.

Assessment of athlete performance :

Measurement is generally defined as "rules for assigning numbers to objects to represent qualities or attributes" (Nunnually, 1978). It is what allows us to render abstract theoretical concepts (motivation, intelligence, aggression, will-to-win, confidence, anxiety, frustration etc.) which are the end products and tools of scientific inquiry, into data points or empirical facts. Measures can include both "tests" and "scales" and are regarded as quantitative estimates of the amount of a property or characteristic that individuals or groups possess. While a test is "a systematic procedure in which individuals being tested are presented with a set of constructed stimuli, called items, to which they respond in one way or another" (Kerlinger, 1979), a "scale" or "questionnaire" is also a test but lacks the competitive flavour; "it is an instrument so constructed that different numbers can

be assigned to different individuals to indicate different amounts of some property or attribute". A typical example of a psychological test from the field of sport psychology would be sport competition Anxiety test by Rainer Martens. And a typical psychological scale would be a self-efficacy scale, which ranges from 1 to 100 and requires individuals to indicate their confidence in being able to perform in a given behaviour. Norms for selected tasks typically do not exist, but the scores obtained by subjects do allow for between subjects as well as subject comparison.

Performance test :

A performance test requires a subject to manipulate an object or a mechanical device to register his or her response to a given stimulus as in a test of reaction time, reflex time, depth perception, visual tracking etc. Most of the psychomotor abilities of children are assessed when they are instructed to perform certain acts using mechanical apparatuses. When conducted under ideal conditions, performance tests yield very valuable data on mental abilities, cognitive processes and motor behaviour of children of varying age. There is a wide range of performance tests available these days to be suitably used on diverse subject groups under varying conditions.

Reaction time :

Reaction time (RT) is an index of the processing ability of central nervous system and a simple means of determining sensory-motor performance. Reaction time is the elapsed time between the presentation of sensory stimulus and the subsequent behavioural response. RT is often used in experiment psychology to measure the duration of mental operations, an area of research known as mental chronometry. In psychometric psychology, it is considered to be an index of speed of processing. That is, it indicates how fast the thinker can execute the mental operations needed by the task at hand. In turn, speed of processing is considered an index of processing efficiency. The behavioural reponse is typically a button press but can also be an eye movement, a vocal response, or some other observable behaviour.

Reflex time :

A reflex action or reflex is a biological control system linking stimulus to response and mediated by a reflex arc. Reflexes can be built-in or learnt. For example. A person stepping on a sharp object would initiate the reflex action through the creation of a nociceptive stimulus within specialized sense receptors located in the skin tissue of the foot. The resulting stimulus would be transmitted through an afferent nerve to the spinal cord. This stimulus is usually processed by an interneuron to create an immediate response to nociception by initiating a motor response to withdraw

from the pain producing object. This retraction would accur as the sensation is arriving in the brain and producing the subjective perception of pain, which would result in a more cognitive evaluation of the situation.

Reflexes are tested as part of a neurological examination to assess damage to or functioning of the central and peripheral nervous system.

Reflexes may be trained, such as during repetition of motor actions during sport practice. Or the linking of stimuli with autonomic reactions during classical conditioning.

Depth perception :

Depth sensation is the ability to move accurately, or to respond consistently. Based on the distances of object in an environment depth perception arises from a variety of depth cues.

Visual tracking :

Visual tracking of the human body has attracted increasing attention due to the potential to perform high volume low cdost analyses of motions in a wide range of applications, including sports training, rehabilitation and security. Visual tracking of human movement has attracted much attention due to the wide variety of applications which could be performed autonomously however, currently need human interpretation. These applications include sports training rehabilitation and security. Autonomous interpretation of human movement allows a much larger volume of analyses to be performed at a much reduced cost. Biometric analysis has already established itself as an effective training tool for athletes, although most techniques rely on the use of retro.

Reflective markers or magnetic sensors to be placed on an athlete before such analysis can be performed.

The aim of this project is the development of a system which uses visual cues to obtain a golfers postural information, and analyzes this with respect to a learned ideal motion. This data is then fused with information from a golf swing analyzer nat which detects information about the club head which is infeasible to detect visually. Completely automated feedback can then be given based on differences between the athlete's motions and the technically correct motion

Summary and conclusion :

In every sport achievement, there is a beg effort behind the players. A coach has good assessment tools for measuring his players ability. Every sport need better technique compare to your opponents if you want to beet theme then you should be have good technique and strength.

Assessment has the potential to provide councils with a powerful planning tool, supporting effective usage and management of their sports fields.

■ REFERENCES

Bozdogan, H. (1987). Model selection and akaikes information criterion (AIC). the general theory and its analytical extensions. *Psychometrika,* **52**(3): 345 -370.

Deutscher, J., Blake, A. and Reid, I. (2000). Articulated body motion capture by annealed particle filtering. Proc. Computer vision and pattern recognition conference, **2**:126-133.

Deutscher, J., Davison, A.J. and Reid, I. (2001). Automatic partitioning of shigh dimensional search spaces associated with articulated body motion capture. IEEE Conference on computer vision and pattern recognition.

Doe, John (2006). Athlete performance assessment. Center for Applied Axiometrics.

Fua, P., Gruen, A., Apuzzo, N. D'. and Plankers, R. (2002). Markerless full body shape and motion capture from video sequences. *Internat. Archives Photogrammetry & Remote Sensing,* **34**(5): 256- 261.

■ WEBLIOGRAPHY

www. Google.com 10/03/10.

*****