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General psychological factors affecting physical performance and sports

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Abstract

Sport psychology help professional and amateur athletes to deal with their problems, improve their performance and achieve their goals. Sports psychology can even help people outside the playground. Sports psychology important for successful performance in most sports, it can help all athletes to Enhance performance, Cope with the pressures of competition, Recover from injuries, Keep up an exercise program and enjoying their sports. The present conceptual paper will review general psychological factors that already affect the athletes' performance and sports.

Keywords: Psychological factors, psychology, sports psychology, sports, physical education

1. Introduction

The word psychology refers to the study of human behavior, and sports psychology denotes sub category of psychology that deals with the behavior of athletes and teams engaged in competitive sports. Sports psychology is that branch of psychology which is intimately connect with human behavior on the play field, both under practice and competitive situations. 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. [1] 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. Sports psychology is essentially the study of how the mind affects physical activity and athletic performance. According to the American Psychological Association, "sports psychology addresses the interactions between psychology and sport performance, including the psychological aspects of optimal athletic performance, the psychological care and well-being of athletes, coaches, and sport organizations, and the connection between physical and psychological functioning [2]." Sports psychologists can teach skills to help athletes enhance their learning process and motor skills, cope with competitive pressures, fine tune the level of awareness needed for optimal performance, and stay focused. Psychological training should be an integral part of an athlete's holistic training process, carried out in conjunction with other training elements. This is best accomplished by a collaborative effort among the coach, the sport psychologist, and the athlete; however, a knowledgeable and interested coach can learn basic psychological skills and impart them to the athlete, especially during actual practice. Educational sports psychologists instruct their clients on the use of psychological techniques such as goal setting, energy management, relaxation skills, self-talk and positive imagery in order to maximize performances. They usually possess background training in kinesiology and become certified through organizations such as the Association for Applied Sport Psychology (AASP) [3].

2. Psychological factors affecting physical performance

Performance in sports is no longer dependent on physiological well-being of the athlete. It is clear now that there are numerous psychological factors which affect and improve the physical performance. The important psychological factors which affect the physical performance and sports are as below:

2.1 Personality

In dictionary, personality means the quality or condition of being a person, but there are many early definitions for personality like "personality is the entire mental organization of a human being at any stage of his development. It embraces every phase of human character: intellect, temperament, skill, morality, and every attitude that has been built up in the course of one's life"^[4]. The concept of personality is dynamic because human self is dynamic - always acting, interacting, adapting, adjusting, assimilating and integrating. This fact assumes great significance when it comes to understanding the personality development. The human personality is a marvelously complicated structure, delicately woven of motives, emotions, habits and thoughts, into a pattern that balances the pulls and pushes of the outside world^[5]. Since 1960, several comprehensive literature reviews have been completed in an attempt to clarify the relationship between personality and sports performance^[6, 7]. However it is good to remember that the relationship between sports performance and personality is far from crystal clear, it seems equally true that certain general conclusion can be drawn. Athletes differ from nonathletic on many personality traits^[8]. One research showed that athletes who participate in team and individual sports are more independent, more objective, and less anxious than non-athletes^[9]. From other research it is also clear that athletes is often more intelligent than average^[10]. Additionally, Cooper in his research describes the athlete as being more self-confidence, competitive, and socially outgoing than the non-athlete^[11]. Generally, athletes differ from nonathletes in many personality traits. For example, it can be demonstrated that athletes are generally more independent, objective, and extraverted than nonathletes, but less anxious. The athletic pyramid as in (Fig.1) shows that athletes become more alike in their personality and psychological traits. At the base or entrance level of sport, athletes are very heterogeneous, or have different personalities. When trying to differentiate between athletes of varying skill levels in the middle and lower parts of the pyramid, we meet with failure, but if we select the higher level of the pyramid the athletes become more homogeneous in their personality traits. We can confirm that the differences exist in the personalities of athletes who engaged in different types of sports^[12]. Perhaps the clearest distinction occurs between athletes involved in team sports and those involved in individual sports. For example, team sport athletes are more extraverted, dependent, and anxious than individual sport athletes. Certainly, one might expect some differences to emerge between football players and tennis players in terms of personality traits^[13]. In many cases, athletes playing different positions on the same team can be differentiated as a function of personality characteristics. This is especially pronounced in sports in which athletes are required to do very different kinds of things. Point guards in basketball, setters in volleyball, and goalies in soccer or ice hockey can be expected to exhibit personality characteristics different from those of some other position players^[14, 15]. After reviewing much of the available literature on the female athlete and personality, and the expected differences between male and female athletes, it was cautiously concluded that the normative female differs in personality profile from the successful female athlete. Specifically the female athlete is found to exhibit personality traits much like those of both the normative male and the male athlete, for example, assertive, achievement oriented, dominate, self-sufficient, independent, aggressive, intelligent, and reserved^[16]. In comparison with available norms, female body builders were observed to be

more extraverted, more vigorous, less anxious, less neurotic, less depressed, less angry, and less confused^[17]. We can conclude that personality differences are inevitable, as two individuals cannot possess similar personality traits. Personality traits are basic to sports excellence. It is necessary to identify and cultivate those personality traits which are most conducive to the performance in sports. Hence personality is an important psychological factor which, to a great extent determines the result of any athletic output^[18].

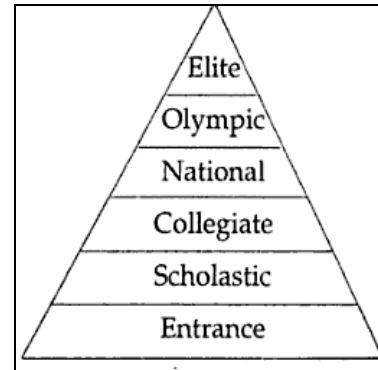


Fig 1: The personality performance athletic pyramid^[19]

2.2 Learning

It is impossible to explain behavior without reference to learning, it is the process comprehensively covering all interactions, experiences and transformations, which an individual happens to have during his lifetime, and which leave, more or less, permanent effect on him. If learning were removed from human life, a person would be helpless. Beside this, there would be no such general characteristics of social behavior such as intolerance, hate, love, shame, envy, jealousy, sympathy, etc., because these all are learnt. There are a lot of psychological definitions of learning. It's a process that brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views^[20, 21]. Educational psychologists have identified several principles of learning, also referred to as laws of learning, which seem generally applicable to the learning process. These principles have been discovered, tested, and used in practical situations. They provide additional insight into what makes people learn most effectively. Edward Thorndike developed the first three "Laws of learning:" readiness, exercise, and effect. Since Thorndike set down his basic three laws in the early part of the twentieth century, five additional principles have been added: primacy, recency, intensity, freedom and requirement. The first three laws and their relation to physical activity as outlined below:

2.2.1 Law of Readiness

Readiness or preparedness makes one learn more quickly and effectively than otherwise. If a person is not ready to act, it will be annoying for him to act on compulsion. When a child is ready to learn, he will learn more willingly and effectively than otherwise. If a person is not ready to act, it will be annoying for him to act on compulsion. When a child is ready to learn, he will learn more willingly and effectively than at any other time. Thus, the state of readiness is one of the most important laws of learning. An individual should be physically, mentally, and emotionally mature and read to learn if actual learning is to take place. Interest is the motivation force for all learning. Hence, every effort should be made to

motivate the child for educative activity. The physical education teacher should create interest in the students so that they may be ready to receive the activities and put forth their best. The principle of giving warming up exercise is based on this law^[22].

2.2.2 Law of Exercise

This law emphasize that practice makes a man perfect. By repeating over and over again, the reaction becomes automatic. This law is somewhat similar to the law of use and disuse. It involves principles of exercise, and of repetition or practice or drill. We learn and retain by use, and forget by disuse. Individuals learns by doing. Practice of aerobics gymnastics, shooting, typing etc. are the obvious examples of this law. Highlighting the application of this law in physical education and sports, Charles A. Bucher has stated “the law of exercise, in respect to the development of skills in physical education, means that practice makes for better coordination, more rhythmical movement, less expenditure of energy, more skill, and better performance”^[23].

2.2.3 Law of Effect

According to Thorndike^[24], satisfaction enhances learning to a great extent. This law is also known as law of satisfaction. By effect, is meant the effective result of any activity. Activities which are accompanied by a feeling of pleasure or satisfaction are more readily and easily learned than activities which are unpleasant. The speed of learning depends on satisfaction. Children like pleasurable experience and dislike unpleasant ones. For example play is pleasurable activity and therefore children engaged in it even without formal motivation, and will tend to avoid those activities which are not of their choice and liking. Physical education teacher should make every attempt to provide activities that produce a feeling of gratification and satisfaction.

All the above laws, when applied to learning skills in physical education, state that the student must either be ready or must be motivated to be ready, and the act must be repeated time and again before one can become proficient. This process proceeds much more rapidly if the student experiences satisfaction, and this feeling of satisfaction can be experienced only when some success has been achieved.

3. Intelligence

Intelligence is aggregate mental capacity or energy of an individual to act purposefully, to think rationally, and to deal effectively with one's environment. Defining intelligence in concrete terms has all through been a challenge with psychologists, philosophers and educationist over centuries probably because the list of functions, operations and activities attached to it is so exhaustive. Individuals differ from one to another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience and to engage in various forms of reasoning^[25]. There are a lot of definitions of intelligence, one of them comes from Mainstream Science on Intelligence, which was signed by 52 intelligence researchers in 1994. “Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. The relationship between physical activity and intelligence has often been a matter of serious debate among sports

psychologists. The nature of this relationship, however often depends on how close the physical and the intellectual elements are embedded in an activity. On this issue, Digiovanna (1937) said that intelligence is exercised in the analysis of skilled movement, the more complex and the more interpretative the movement, the greater amount of intelligence necessary to comprehend it. Intelligence in athletics also exercised in the strategy in various games. Given a series of athletic tasks, administered under the same conditions and with all other factors influencing athletic achievement to two individuals, identical in physique but differing in intellect, it is reasonable to believe that the more intellectual will prove superior. The assumption now is that intelligence plays apart in athletic achievement^[26]. Intelligence of an individual plays an important role in effecting physical performance. The more complex and the more interpretative the movement, the greater the amount of intelligence necessary to comprehend. Sports activities involve complex skilled actions. Since all skilled behavior is intelligent behavior so, the relationship between sports performance and intelligence cannot be denied.

4. Attention and concentration

Everything in life responds to attention. People, objects, stocks of inventory, and money. Attention is the concentration of consciousness upon one object rather than upon another. It is the process of getting an object or thought clearly before the mind. It helps in bringing mental alertness and preparedness, and as a result, one becomes alert and alive, and tries to exercise one's Mental and physical power as effectively as possible. The best definition for attention come from James (1890)^[27]. He said attention is taking possession by the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought. It implies withdrawal from something in order to deal effectively with others^[27]. Performance in physical activity and sport greatly depends on attention, because all psychosomatic process such as sense perception, cognitive, motor memory, intelligence, etc., are closely associated with it. This makes incumbent on young boys and girls at school to be very attentive during the activity lesson so that they miss no vital cues which govern performance of an important skill or series of skills. Similarly the competitive athlete have to acquire the ability to combat distracters during practice and competition and develop one pointed concentration, a state in which all body and mental energies are brought to a flashpoint^[28]. The athletic trainers and physical educators need to be aware of individual differences in the development of mechanisms of selective attention important in the storage and retrieval information relevant to various tasks. Assessment of attentional capacities may be very useful for this purpose. A direction dimension refers to the extent to which attention is directed externally to environment stimuli or internally to cognitions and emotions. Collectively these dimensions allow the attentional requirements of different tasks to be positioned in one of four possible quadrants (Fig 2). Giving high quality attention to the skill during sports competition is important for effective performance. Various cognitive strategies and intensive over learning of skills may enhance the capacity to focus attention on the task at hand, resulting in better performance. There are number of factors which distract and reduce attention and concentration, which in turn will result in poor performance^[29].



Fig 2: Dimensions of attention [30]

5. Motivation

It is difficult to imagine anything being more important to success in sport than motivation. In psychology, motivation refers to the initiation, direction, intensity, and persistence of behavior. Motivation is the foundation for all athletic effort and accomplishment. Without your desire and determination to improve your sports performances, all of the other mental factors, confidence, intensity, focus, and emotions, are meaningless. To become the best athlete you must be motivated to do what it takes to maximize your ability and achieve your goals. Motivation, simply defined, is the ability to initiate and persist at a task. To perform your best, you must want to begin the process of developing as an athlete and you must be willing to maintain your efforts until you have

achieved your goals. Motivation in sports is so important because you must be willing to work hard in the face of fatigue, boredom, pain, and the desire to do other things. Motivation will impact everything that influences your sports performance: physical conditioning, technical and tactical training, mental preparation, and general lifestyle including sleep, diet, school or work, and relationships. There are two primary types of motivation... Intrinsic and Extrinsic Motivation. Extrinsic Motivation is geared toward external rewards and reinforces. Extrinsic motivation may come from social sources, such as not wanting to disappoint a parent, or material rewards, such as trophies and college scholarships. Extrinsically motivated athletes tend to focus on the competitive or performance outcome. An over-emphasis on extrinsic motivation may lead athletes to feel like their behavior is controlled by the extrinsic rewards. On the other hand, athletes may continue to feel like they control their own behavior even with the presence of extrinsic rewards. Intrinsic Motivation is geared toward internal rewards and reinforces. Intrinsically motivated athletes participate in sport for internal reasons, particularly pure enjoyment and satisfaction, and intrinsically motivated athletes typically concentrate on skill improvement and growth. One of the most important motivation theories in needs theory. Maslow's describe this section in his hierarchical pyramid of needs (Fig.3) [31]. The lowest levels of the pyramid are made up of the most basic needs, while the more complex needs are located at the top of the pyramid. As people progress up the pyramid, needs become increasingly psychological and social. Maslow emphasized the importance of self-actualization [32], which is a process of growing and developing as a person to achieve individual potential.

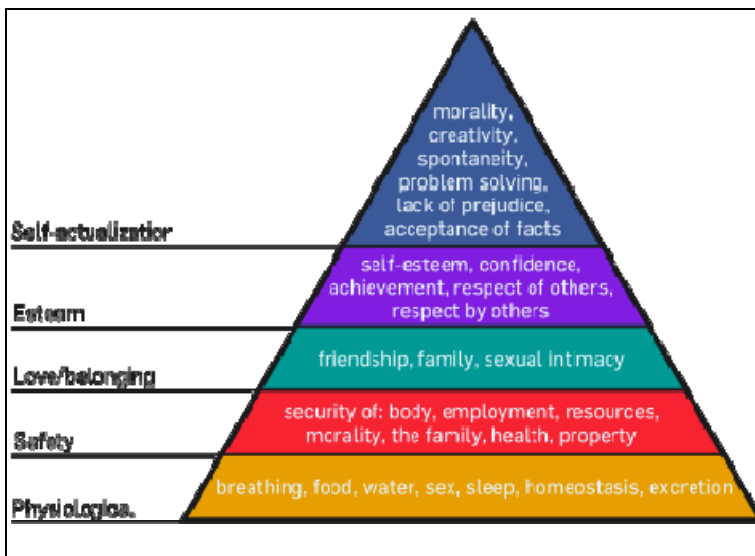


Fig 3: Maslow's Hierarchical pyramid of needs

We can conclude that motivation is a force, a drive which prompts, compels, and energizes and individual to act or behave in a particular manner, at a particular time, for attaining the specific goal or purpose. Motivation is basic to overcome the hurdles which otherwise could have influenced the performance negatively. Without proper attention, keen interest, setting of right attitude, and the resulting optimum level of motivation, many top class athletes have failed to accomplish their task. It is thus necessary to find out ways and

means of motivation athletes for better physical performance [33].

6. Emotions

Emotions are our feelings. Literally, we feel them in our bodies as tingles, hot spots and muscular tension. Emotions are biologically based adaptations that assist us in responding to particular external stimuli. We win a soccer match, we jump with joy, we lose a dear one, we feel sad, we see a beggar, we

laugh, and so on. Almost every situation evokes some feeling, and as the situation becomes intense, it is expressed as emotion. No aspect of our mental life is more important to the quality and meaning of our existence than emotions, because emotions actually express our true feelings. According to Young definition, emotions are actually disturbed states or processes which originate in psychological situations and which are revealed by marked bodily changes in the glands and smooth muscles. Emotions lies at the top of the Prime Sport Pyramid, The Prime Sport Pyramid is ordered in a purposeful and logical manner. Its order is based on the sequence in which the factors impact sports performance^[34] (Fig. 4). Emotions are a response which is characterized by the generation of energy within the body and psyche. They provide energy for us to confront challenges. Emotions play a central role in sports performance. Without being emotionally aroused an athlete's "psyching up" procedure is not complete. All winning performance are invariably a result of emotional upsurge in the athlete. Emotions has both facilitative and debilitating effect on athletic performance. In general, while positive emotions like joy, happiness, elation, etc., have facilitative effect on performance negative emotions such as anger, fear, anxiety, over-arousal, etc., put hurdles in the way of performance. Research on this issue is full of contradiction and still inconclusive. However, several studies indicate that optimal emotions can initiate and maintain the required amount of effort for a task^[35]. Meaning that when, for example an athlete's anxiety level is optimal before and during competition, his or her chances of performing best are also optimal. Optimal emotions keep the athlete energized as a result of which his or her level of motivation level remains high. High arousal due either to anxiety or aggression in sports like soccer, hockey, and basketball, may result in an increase of anaerobic power, but it possibly may reduce the level of accuracy and movement precision as emotional arousal is said to blur it vision and imping upon concentration. Several studies indicate that high arousal coupled with some emotions impairs working memory^[36]. It also reduces cognitive resources available for the task or activity in hand. Emotions can have significant consequences in the sporting world.

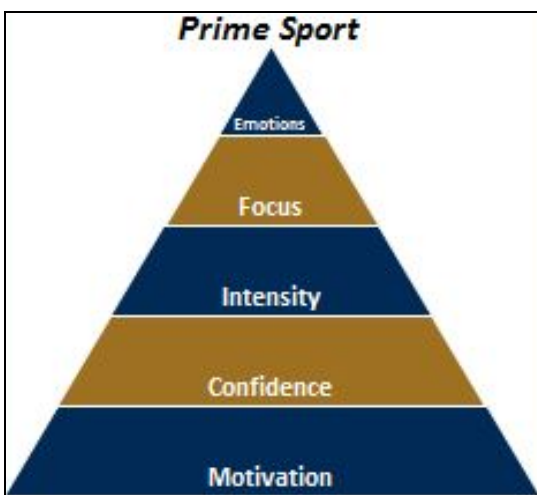


Fig 4: Prime sport pyramid^[37].

Emotions have either positive or negative effects that can be seen when examining the role of emotions on motivational functioning, cognitive functioning, health, interpersonal functioning and performance^[38]. Future research should examine individual differences in the consequences of certain

emotions as well as how to predict performance. In summary, emotions and sport significantly impact upon one another. Certain sporting situations can lead to the development of emotions and these emotions can have significant impacts on sporting aspects. Understanding these factors will aid in the prediction of emotions and the inter- and intra-personal consequences of these emotions.

7. Individual differences

Nature has not made two individuals exactly the same or even similar. People differ from one another in height, weight, color, appearance, speed of reaction, character, personality, behavior, and the like. That people differ from each other is obvious. How and why they differ and what impact do the difference among them has on their behavior, learning ability to acquire various skills and career selection in life is less clear. This subject of individual differences is generally dealt with under individual differences in psychology or differential psychology. Psychology studies people at three levels^[39] as every man in certain respects (a) like all other men, (b) like some other men, (c) like no other man. No two people are alike, yet no two people are unlike. So, in the study of individual differences we strive to understand way in which people are psychologically similar and particularly what psychological characteristics vary between people. The innate differences among individuals are generally seen in such concrete variable as sex, age, ethnicity, body-build, physiological functions and psychological make up. The superficial differences are mostly caused by environmental factors and they exist in social status, economic condition, living standards, education, knowledge, achievement, etc. In education setting, understanding of individual differences helps in designing curriculum, planning course material and training programme both for students and teachers. The situation in physical education and sport is no different from that in education^[40]. In exercise and sport, the individual differences is important principle of training which underscores the fact that optimal benefits are achieved by devising training programmes to suit the specific needs of individual athletes. The principle applies equally well to exercise. Ideally each exercise should have an individualized exercise programme. This would ensure that the exercises are tailored to meet the requirements of the individual, and would minimize the risk of overtraining and overuse injuries. Finally we can say that each athlete is unique to oneself. Apart from physiological differences such as height, weight, etc., there are bound to psychological differences as well. Some athletes may be outgoing and extrovert whereas other may be shy, introvert and withdrawn, and they may also differ in their levels of perception. Some athletes are born strong psychologically while others have weak dispositions. Athletes with weak disposition fail to accomplish their task. Thus individual differences in sports performance are an inevitable phenomenon, and the teacher or coach has to modify his approach according to the nature of each individual athlete^[41].

8. Aggression

Both animals and human beings have biologically inherited aggression as an emotional expression. While aggression in animals has limited biological motive, aggression in man has psychological and social orientation with chief motive being possession (acquisition of wealth, property, territory, etc.), expansion (making the self, community and society grow in dimensions), and domination (showing oneself as stronger, more important, and more effective than others). To achieve

these objectives, man would not mind harming man physically or psychologically. According to Baron (1977): Aggression is any form of behavior directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment. During aggression, attack is initiated with the intent of injuring the other person. Hence aggression is deliberate and intentional. Aggression has long been a part of the sport domain. Russell suggested that outside of wartime, sports is perhaps the only setting in which acts of interpersonal aggression are not only tolerated but enthusiastically applauded by large segments of society [42]. Aggressive behavior can be classified according to the primary reinforcement sought via the act. Leonard and Cratty identified to forms of aggression in sport, viz. (1) hostile, reactive or retaliatory aggression, and instrumental aggression or non-emotional and task-oriented [43, 44]. If we will speak about the sources of sport aggression so, according to Terry & Jackson, reinforcement for acts of violence may come from (1) the athlete's immediate reference group coaches, team mates, family and friends; (2) structure of the game and implementation of rules by officials and governing bodies; and (3) attitudes of fans, media, courts, and society [45]. Dollard, decided to produce a new theory to try and explain the causes of aggression. That's where the frustration-aggression hypothesis comes from. This includes the most important factors in aggression which is described as the characteristics of the situation itself. Dollard still agreed that we have an

innate aggression instinct, by for this aggressive behavior to be released, it must be the cause of frustration. This basically means that all frustration leads to aggressive behavior [46]. Berkowitz, further developed this claim and suggested that the frustration doesn't lead directly to aggression, but rather to anger (an emotion). If the frustration is unexpected or unfair this will lead to more anger which could then lead on to releasing aggression to relieve ourselves from the frustration. If we are able to release the aggression then we will reach catharsis [47]. This is a stage also known as 'letting go' where all anger and frustration is released (Fig 5). We can conclude that aggression is a part of human behavior and is necessary for an individual to live and struggle for higher achievements. Struggle for supremacy, dominance, and excellence in sports obviously involve aggression. Aggression in one form or the other, is inevitable and inescapable in sports activities. When hostility takes over aggression, the situation becomes alarming and it becomes anti-social behavior. Aggression may help in the performance of an athlete to put in harder effort for the success of the team. Athletes must be helped to reduce and control aggression in order to play calmly and perform the best. Appropriate level of aggression, as permitted under the rules governing the game, tend to improve the skill and enhance the effort, and on the other hand, high or low level of aggression will humper and retard the performance in sports.

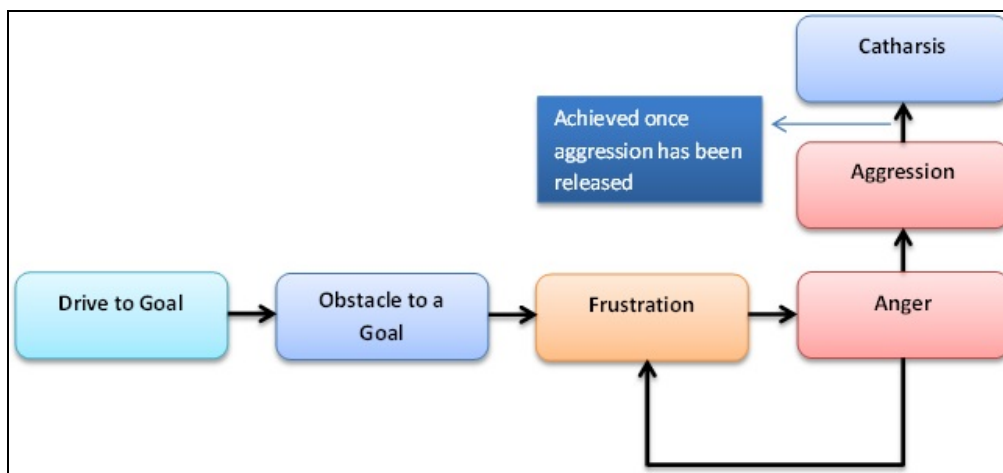


Fig 5: The Frustration Aggression theory [48].

9. Stress and Anxiety

In psychology, stress is a feeling of strain and pressure. Small amounts of stress may be desired, beneficial, and even healthy. Positive stress helps improve athletic performance. It also plays a factor in motivation, adaptation, and reaction to the environment. Excessive amounts of stress, however, may lead to bodily harm. Stress can increase the risk of strokes, heart attacks, ulcers, dwarfism, and mental illnesses such as depression [49]. Stress can be external and related to the environment, [50] but may also be created by internal perceptions that cause an individual to experience anxiety or other negative emotions surrounding a situation, such as pressure, discomfort, etc., which they then deem stressful. Not all stress is bad for your performance. Stress can affect your performance in two different ways. There are many factors which can cause stress for an athlete. There are two ways these are demonstrated, the stress model and the stress response process (Fig. 6). The stress model demonstrates what factors affect stress in sport. Stress can affect performance, the way an

athlete responds to the stress can affect it, and the management of the stress can negatively or positively affect the athlete's stress level [51]. So, stress can help you when it makes you more alert, more motivated to practice, and gain a competitive edge. In the right amount, stress helps you prepare, focus, and perform at your optimal level. Conversely, too much stress, or bad stress, can cause performance anxiety, which hurts your health and does not allow you to play relaxed, confident, and focused in competition. Every competitive athlete experiences some stress; good and bad. Your stress may be positive and helpful or instill anxiety and apprehension. Pregame jitters can cause some athletes to not sleep well the night before competition. Some athletes can't eat the morning before a big game. Your pre-competition jitters may make you feel like you have to throw up. Stress is often accompanied by physical symptoms. One of the most common physical symptom of stress is increased muscle tension, which can obviously interfere with motor functions like swinging a club. Several things can help an athlete cope with stress. First, he should eat

and sleep well, especially before a game or match. He should also learn and practice relaxation techniques, such as deep breathing, muscle relaxation, visualization and positive self-talk. Additionally, an athlete should engage in some type of

physical activity other than the sport he is currently involved in. Finally, an athlete should not expect to be perfect without mistakes. Every athlete makes mistakes from time to time.

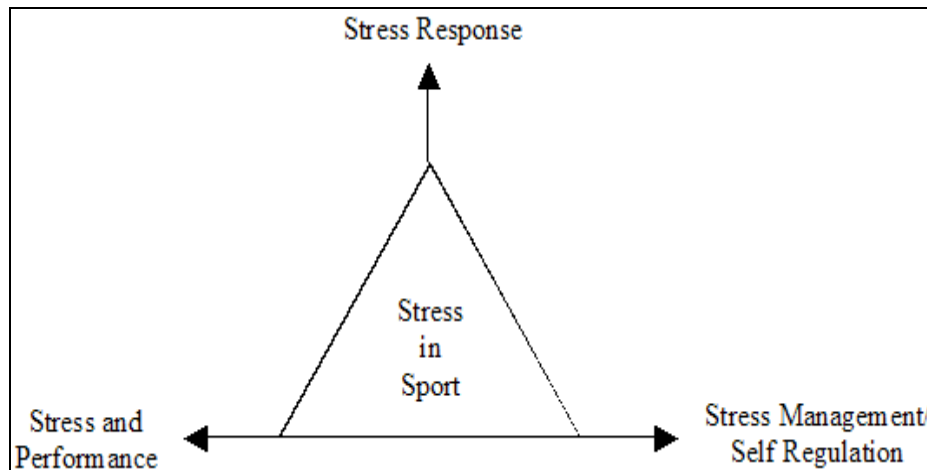


Fig 6: Stress Model, Graham-Jones & Hardy (1990) [52].

Anxiety is a uniquely commonplace experience that everyone experiences from time to time. It is an emotional state, represented by a feeling of dread, apprehension, or fear. Medical experts sometimes categorized anxiety as an emotion or an affect depending on whether it is being described by the person having it (emotion) or by an outside observer (affect). The word emotion is generally used to describe biomechanical changes and feeling state that underlie a person's internal sense of anxiety. Affect is used to describe the person's emotional state from an observer's perspective. Anxiety is an abstract concept, so difficult to describe concretely because it has so many different potential causes and degrees of intensity. Johnson in his definition said anxiety is a disturbed state of the body [53]. Also Pikunas said anxiety is an unrealistic and unpleasant state of body and mind [54]. Anxiety can be recognized on three levels (1) Cognitive - by particular thought process, (2) Somatic - by physical response, and (3) Behavioral - by patterns of behavior [55]. Sport anxiety is simply mind-body state that is marked by uneasiness, fear or worry. It is usually a conditioned response to a stimulus. The precise impact of anxiety on sporting performance depends on how an athlete interprets his or her world. Unfortunately, far too many athletes accept high levels of anxiety as an inevitable part of the total sporting experience and fail to reach their potential. Its dynamic in different sports and different competition situation is of great interest to the athlete and their trainers. Sports places a wide variety of stressors upon participants; it can be physically exhausting, it pitches you against superior opponents, and hostile fans might verbally abuse you. These elements may need to be overcome and your emotional frailties are constantly laid bare for all to see. When the demands of training or competition exceed one's perceived ability, anxiety is the inevitable outcome. Sports differ from one another in skill structure, play dynamics, competition procedure and the need for physical and psychological training. Therefore, not all sports generate the same kind and the same amount of anxiety in sports persons. Traditional coaches and trainers may try to help the athlete understand why negative or anxiety-producing thoughts and feelings develop and then try to change or modify that process with limited amounts of success. Research reports on the role of anxiety in exercise and sport, and the relationship between

anxiety and athletic performance have been conflicting, and often confusing, chiefly due to inconsistent terminology used and lack of agreement among the scientists over the very meaning and concept of anxiety [56]. Finally we can say that anxiety is one of many emotions that may arise in response to a competitive situation. An emotion is associated with a physiological change, a subjective experience, and an action tendency. As we can see anxiety includes state and trait dimensions both of which can show themselves as cognitive and somatic symptoms. An athlete with high anxiety trait (A-trait) is likely to be more anxious in stressful situations. To help the athlete control competitive anxiety somatic techniques (relaxation) and cognitive techniques (mental imagery) can be used.

10. Group dynamics

Group dynamics is a system of behaviors and psychological processes occurring within a social group (intragroup dynamics), or between social groups (intergroup dynamics). The study of group dynamics can be useful in understanding decision-making behavior, tracking the spread of diseases in society, creating effective therapy techniques, and following the emergence and popularity of new ideas and technologies [57]. Individual behavior is influenced by the presence of others. For example, studies have found that individuals work harder and faster when others are present, and that an individual's performance is reduced when others in the situation create distraction or conflict [58]. Groups also influence individual's decision-making processes. These include decisions, persuasion, obedience, and groupthink. There are both positive and negative implications of group influence on individual behavior. This type of influence is often useful in the context of work settings, and team sports. However, the influence of groups on the individual can also generate extremely negative behaviors [59]. The first factor related to group dynamics is Stages of Group Development and these fall into four categories which are Forming, Storming, Norming and Performing. Team Cohesion is another factor that can affect the group dynamics of a team and is a big factor that if a team does not have it, it could affect their performance greatly. The dynamic within the group is also an important consideration in building group cohesion.

Group cohesion is defined as “a measure of the extent to which a group works together socially or to complete a task”. Group dynamics describes the processes within a group and between the members of the group. This can also be described as the energy the group exhibits. Successful groups with a dynamic have “chemistry”. This is difficult to guarantee – it depends on individual personalities, but can be the product of leadership and cohesion within a group. A clear goal and the nurturing of personalities all contribute to the dynamic within a group. Leaders will seek out individuals to join the group who have similar social and task characteristics and a shared ethos – groups are often fashioned in the image of the leader^[60]. A sports team is comprised of various individual athletes, each having different orientations and perceptions, and at times, these differences may interfere with performance of the team. Better performance will result if each member of the team merges his personal feelings and abilities into a total team effort. Success of a team depends on adjustment within i.e. how closely the team seems to be working and feeling together. Psychological togetherness among the members of the team does reflect on the outcome of the performance. Group dynamics and performance are thus mutually influential, and are further influenced by the stability of the personnel concerned with the team. It has been found that better group cohesion, generally tends to produce better performance^[61].

11. Mental Imagery

Imagery may be defined as using one’s senses to create or recreate an experience or visual image in the mind that at times may seem to be as real as seeing the image with our physical eyes^[62]. An expansion of this brief definition clarifies that an image can be created in the mind in the absence of any external stimuli, also an image may involve one or more physical sense, and an image is created from information stored in the sensory store, working memory, or long-term memory. The mental practice literature is very instructive relative to the general application of imagery to sport. Among other things, the mental practice literature provides evidence that imagery is an effective cognitive process for enhancing learning and performance of motor skills. Mental practice is an important adjunct to the learning of almost all sport skills^[63]. The literature suggests that in addition to physically practicing a sport skill, the athlete should spend a small amount of time rehearsing execution of the skill in her mind. Mental practice can occur prior to actual physical practice, or it can occur at a time when physical practice is not possible (e.g., while traveling, in the locker room, while resting). Research with mental practice has also revealed several principles that enhance the effectiveness of mental practice^[64]. Mental ability and imagery help the athletes to empower their emotional state, and the way they approach the physical efforts. Such mental activity enables the athlete to improve the execution and precision of the given skill or task by thinking and imagining about it. Mental imagery of critical competitive situations is essential to boost the fighting spirit to help an athlete to organize himself in a better way. Mental rehearsal of competitive situations certainly help in improving athlete’s emotional state as well as his physical performance. It also helps in the smooth flow of energy as and when required^[65].

12. Conclusion

There is no sport without physical education at the gross root level. The physical educator and the athletic coach face the same problems of human behavior and grapple with them

almost in a similar fashion. The application of psychological concepts to understanding and conditioning behavior in activity and sport is more a matter of degree than of kind. Psychology in physical education perspective focuses on general process and procedures of learning, motivation, play, growth and development, etc., in sport perspective, its concerns become more intense and specific in consideration of the type of sport. Psychological training, coping strategies, interventions, mental skills etc., have greater relevance in competitive sport than activity and recreational sport. Generally speaking, psychology in physical education addresses such important areas as personality, learning, intelligence, attention and concentration, motivation, emotions, individual differences, aggression, stress and anxiety, group dynamics and mental imagery with the objective to understand the real springs of activity behavior, guide behavior into realizing one’s potential through activity programs and to optimize benefits of physical activity in terms of growth and development. So, it is very important to all coaches, physical education teachers and any sports trainer to be aware about all the above general psychological concepts.

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