

CHAPTER 11: ANXIETY, AROUSAL AND STRESS RELATIONSHIP IN SPORT

Definition

- **Arousal**
 - A blend of physiological and psychological activity in a person
 - It refers to the intensity dimensions of motivation at a particular moment
- **Anxiety**
 - A negative emotional state in which feelings of nervousness, worry, and apprehension are associated with activation or arousal of the body

- State anxiety
 - A temporary, ever changing emotional state of subjective, conscious perceived feelings of apprehension and tension associated with activation of autonomic nervous system
- Cognitive state anxiety
 - Moment-to-moment changes in worries and negative thoughts
- Somatic state anxiety
 - Moment-to-moment changes in perceived physiological arousal

- Trait anxiety
 - Is a behavioral disposition to perceive as threatening circumstances that objectively may not be dangerous and to then respond with disproportionate state anxiety

Defining Stress and the Stress Process

- Stress is defined as a substantial imbalance between demand (physical/psychological) and response capability, under conditions where failure to meet the demand has important consequences
- Consists of four interrelated stages: environmental demand, perception demand, stress response, and behavioral consequences

- ***Stage 1: Environmental demand***

- Some type of demand is placed on an individual
- Ex: when a physical education student has to execute a newly learned volleyball skill in front of the class

- ***Stage 2: Perception demand***

- Individual's perception of the physical or psychological demand

- People do not perceive demands in exactly the same way
- A person's level of trait anxiety greatly influence how that person perceives the world
- *Stage 3: Stress response*
 - The individual's physical and psychological response to a perception of the situation
 - Reactions, changes in concentration and increased in muscle tension, accompany increased state anxiety

- If someone's perception of an imbalance between demands and response capability causes him to feel threatened, increased state anxiety, increased worries
- ***Stage 4: Behavioral consequences***
 - Is the actual behavior of the individual under stress
 - The final stage of the stress process feeds back into the first

Major Sources of Anxiety and Stress

- **Situational Sources of Stress**

- Event importance

- The more important the event, the more stress provoking it will be.

- The greater the degree of uncertainty an individual feels about an outcome or other's feeling and evaluations, the greater the state anxiety and stress

- Uncertainty
 - The greater the uncertainty the greater the stress
 - Some teachers or coaches create unnecessary uncertainty by not informing participants of such things as the starting lineups, how to avoid injury in learning high risk physical skills or what to expect while recovering from a serious athletic injury
 - Be aware of how might unknowingly create uncertainty in participants

- **Personal Sources of Stress**

- Trait anxiety

- High trait anxiety and low self-esteem are related to heightened state anxiety reactions in athlete

- Self-Esteem

- Athletes with low self-esteem have less confidence and experience more state anxiety than do athlete with high self-esteem

- **Physical Physique Anxiety**
 - **Personality disposition: the degree to which people become anxious when others observe their physiques**
 - **People with high social physique anxiety versus people without this kind of anxiety report experiencing more stress during fitness evaluations and experiencing more negative thoughts about their body**

- Significance of arousal-performance views
 - Arousal is a multifaceted phenomenon consulting both physiological activation and an athlete interpretation of that activation
 - We must help performer find the optimal mix of these emotions for best performance
 - Arousal and anxiety do not necessarily have a negative effect on performance

- The effect can be positive and facilitative or negative and debilitating depending on how the performer interprets changes
- Some optimal level of arousal and emotions leads to peak performance, but the optimal level of physiological activation and arousal related thoughts are not necessarily the same

- Psyching up strategies should be used with caution, because it is very difficult for athletes to recover once they experience a performance catastrophe
- Athletes should have well practiced self talk, imagery, and goal setting skills for coping with anxiety. They must also perceive performance goals to be truly attainable

Effects of Anxiety on Competitive Performance

- **Fear of performance failure**
 - The fear of ego devaluation by being defeated by an inferior opponent
- **Fear of negative social evaluation**
 - The fear of losing self-esteem in the face of hundreds or thousands of fans

- **Fear of physical harm**

- Such as being hit in the head by a 90 miles per hour fastball in baseball

- **Situation ambiguity**

- Such as not knowing whether or not one is going to be a starter or a substitute in a game

- **Disruption of well-learned routine**

- Such as being asked to play a completely new position during a game despite never having played it in practice

Relationship between Arousal and Anxiety vs. Performance

- **Increased muscle tension, fatigue, and coordination difficulties**
 - Increased arousal and state anxiety cause increase in muscle tension and fatigue and interfere with coordination

- **Changes in attention, concentration, and visual search patterns**
- Arousal and state anxiety narrow one's attentional field, decrease environmental scanning, and cause a shift to the dominant attentional style and to inappropriate cues

The Measurement of Anxiety and Arousal

- **Physiological Measures**
 - Electroencephalography (EEG)
 - Assessment of brain waves
 - Alpha state – indicative of relaxation
 - Beta state – is suggestive of arousal
 - Blood pressure
 - Increases in blood pressure are associated with arousal

- Heart rate
 - Increases in heart rate or changes in patterns may indicate arousal
- Electromyography (EMG)
 - Muscular tension is measured with EMG. Increases in tension are indicative of arousal
- Levels of epinephrine, norepinephrine, or cortisol
 - These biochemical agents are released during stress and can be measured in blood or urine samples

Signs and Symptoms of Anxiety and Arousal

- Cold, clammy hands
- Need urinate frequently
- Profuse sweating
- Dazed look in the eyes
- Inability to concentrate
- Cotton/dry mouth
- Headache
- Negative self-talk

Ways to Regulate Arousal, Stress and Anxiety

- Identify optimal arousal-related emotions
 - Increase awareness of how arousal-related emotions can lead to peak performance
 - Teaching athletes various psychological strategies can help them regulate arousal
 - Think of arousal as an emotional temperature and arousal regulation as a thermostat

- Identify the optimal emotional temperature for his best performance and then learn how to “set” his thermostat to this temperature either by raising (psyching up) or lowering (chilling out) his emotional temperature
- Recognize the interaction of personal and situational factors
- Creating a positive environment and productive orientation to mistakes and losing

- Tailor coaching and instructional practices to individuals
 - At times arousal and state anxiety levels need to be reduced, at other times maintained, and at still other times facilitated
 - Teacher/coaches should recognize when and with whom arousal and state anxiety need to be enhanced, reduced or maintained

- Develop confidence in performers to help them cope with increased stress and anxiety
- Recognize arousal and state anxiety signs
 - Identify people who experiencing heightened stress and anxiety
 - Must know the signs and symptoms of increased stress and anxiety