Psychology of Athletic Preparation and Performance
Chapter Objectives

• Understand the psychological constructs of arousal, motivation, focus, and confidence and be able to ascertain their impact on physical performance
• Comprehend terms relevant to psychological areas of concern, such as anxiety, attention, the ideal performance state, self-efficacy, imagery, and goal setting
• Understand varying ways to manipulate practice schedules, including whole-part, random, and variable practice, and how to use these schedules to facilitate skill acquisition and learning
• Understand different types of instructions and feedback and their application in a practice and performance setting
• **Sport psychology has three major goals:**
  – Measuring psychological phenomena
  – Investigating the relationships between psychological variables and performance
  – Applying theoretical knowledge to improve athletic performance
Ideal Performance State

• The ideal performance state involves the following:
  – Absence of fear (no fear of failure)
  – No thinking about or analysis of performance
  – A narrow focus of attention on the activity itself
  – A sense of effortlessness
  – A sense of personal control
  – A distortion of time and space
Energy Management: Arousal, Anxiety, and Stress

• Arousal
  – A blend of physiological and psychological activation in an individual; refers to the intensity of motivation at any given moment

(continued)
Energy Management: Arousal, Anxiety, and Stress (continued)

• Anxiety
  – A subcategory of arousal that is a negatively perceived emotional state.
    • Cognitive anxiety: The cognitive component of anxiety
    • Somatic anxiety: The physical reaction component of anxiety
Key Point

• State anxiety is the actual experience of apprehension and uncontrolled arousal. Trait anxiety is a personality characteristic, which represents a latent disposition to perceive situations as threatening.
Energy Management: Interrelationships of arousal, trait anxiety, & state anxiety

**Trait Anxiety**
An acquired disposition that predisposes a person to perceive a wide range of objectively nondangerous circumstances as threatening and to respond to these with disproportionate state anxiety levels.

**Arousal**
A general physiological and psychological activation of the organism that varies on a continuum from deep sleep to intense excitement.

**State Anxiety**
Moment-to-moment changes in feelings of nervousness, worry, and apprehension associated with arousal of the body.

**Cognitive State Anxiety**
Moment-to-moment changes in worries and negative thoughts.

**Somatic State Anxiety**
Moment-to-moment changes in perceived physiological arousal.

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Energy Management: Arousal, Anxiety, and Stress

• Stress
  – A substantial imbalance between demands and response capabilities, under conditions in which failure has important consequences
  – Can be positive (eustress) or negative (distress)
  – Stressor: an environmental or cognitive event that precipitates stress
Influence of Arousal and Anxiety on Performance

• **Drive theory**
  – A theory that as an individual’s arousal or state anxiety increases, so too does performance
  • Skill level: This can increase the latitude of optimal arousal; more skill will correspond to better performance at levels other than optimal arousal.
  • Task complexity: Simple or well-learned skills can tolerate higher degrees of arousal due to lower task-relevant cues for an athlete to monitor.

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Influence of Arousal and Anxiety on Performance (continued)

• Inverted-U theory
  – Arousal facilitates performance up to an optimal level, beyond which further increases in arousal are associated with reduced performance.

• Figure 8.2 (next slide)
  – Inverted-U theory and its modifications
Inverted-U theory and its modifications
Influence of Arousal and Anxiety on Performance

• Individual zones of optimal functioning theory
  – Different people perform best with very different levels of arousal.

• Catastrophe theory
  – When increases in physiological arousal occur in the presence of cognitive anxiety, a sudden drop (rather than a gradual decline) in performance occurs.

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Influence of Arousal and Anxiety on Performance (continued)

• Reversal theory
  – The effect of arousal and anxiety on performance depends on how they are interpreted.
  – One athlete may interpret high levels of arousal as excitement and feel ready for performance, while another experiencing the same level of arousal may interpret the feelings as unpleasant and reflective of a lack of confidence.
Motivation

- **Intrinsic and extrinsic motivation**
  - Intrinsic motivation is a desire to be competent and self-determining.
  - The athlete is a self-starter because of his or her love of the game.
  - Extrinsic motivation comes from external sources such as awards, social approval, or fear of punishment.
Motivation (continued)

- **Achievement motivation**
  - Achievement motivation is the athlete’s wish to engage in competition or social comparison.
  - Whoever is higher in achievement motivation will be the better athlete because he or she has an appetite for competition.
Key Terms

- **motive to achieve success (MAS):** The capacity to experience pride in one’s accomplishments, characterized by a desire to challenge oneself.

- **motive to avoid failure (MAF):** The desire to protect one’s ego and self-esteem; more about avoiding the perception of shame than about avoiding failure.
Motivation

• Motivational aspects of skill learning (self-controlled practice)
  – Involves the athlete in decisions related to practice structure, including when to receive feedback and which skills to practice, as well as asking how athletes feel they are doing
  – Promotes a more active involvement in the practice session and can enhance feelings of competence and autonomy

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Motivation (continued)

• **Positive reinforcement**
  – The act of increasing the probability of occurrence of a given behavior by following it with or presenting an action, object, or event such as praise, decals on the helmet, or prizes and awards.

• **Negative reinforcement**
  – Increases the probability of occurrence of a given operant by removing an act, object, or event that is typically aversive.
Motivation (continued)

• Positive punishment
  – The presentation of an act, object, or event following a behavior that could decrease the behavior’s occurrence.

• Negative punishment
  – The removal of something valued, such as privileges or playing time.
Motivation (continued)

• Coaches should generally subscribe to a reinforcement strategy to assist athletes in focusing on what they do correctly.

• Punishment should be used sparingly because it increases the likelihood that the athlete will focus on what he or she is doing incorrectly.
Motivation (continued)

- Positive reinforcement aids focus on task-relevant cues.
- Punishment floods attentional capacity with a predominance of task-irrelevant cues.
Attention and Focus

• The ability to focus attention on task-relevant cues and to control distraction is a skill that can be learned and that improves with increased experience.
Key Terms

• **attention**: The processing of both environmental and internal cues that come to awareness.

• **selective attention**: The ability to inhibit awareness of some stimuli in order to process others.

• **routine**: Adoption of a ritual or mental checklist.
Key Point

• Selective attention, commonly referred to by athletes as their *level of focus*, is the suppression of task-irrelevant stimuli and thoughts.
Attention and Focus: The four quadrants of attentional focus

- Broad
  - Assess
  - Analyze

- Narrow
  - Act
  - Prepare

External
Internal
Psychological Techniques for Improved Performance

• Relaxation techniques to control elevated arousal and anxiety
  – Diaphragmatic breathing
    • Focuses thought on breathing and clears the mind and therefore increases concentration.
  – Progressive muscular relaxation (PMR)
    • By going through a series of alternate muscular tensing and relaxing phases, the athlete learns to become aware of somatic tension and thereby to control it.

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Psychological Techniques for Improved Performance *(continued)*

- Relaxation techniques to control elevated arousal and anxiety
  - Autogenic training
    - The PMR cycle for each muscle group is replaced with an attentional state that focuses on the sense of warmth and heaviness for a particular limb or muscle group.
  - Systematic desensitization
    - Combines mental and physical techniques that allow the athlete to replace a fear response with a relaxation response.
Psychological Techniques for Improved Performance (continued)

• How should athletes use arousal control techniques?
  – An athlete should employ arousal reduction techniques when performing a new skill or one that is complex.
  – Athletes should employ arousal enhancement techniques when executing simple skills or ones that are well learned.

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Psychological Techniques for Improved Performance (continued)

• How should athletes use arousal control techniques?
  – The purpose of employing such techniques is to allow the athlete to perform with an unburdened mind while matching his or her mental and physical intensity to the demands of the task.
Psychological Techniques for Improved Performance (continued)

• Imagery
  – The cognitive psychological skill in which the athlete uses all the senses to create a mental experience of an athletic performance
  – Allows athletes to get used to uncertain environments over longer periods of time despite minimal real-world competitive opportunity.
Psychological Techniques for Improved Performance (continued)

• **Self-confidence**
  – The belief that one can successfully perform a desired behavior

• **Self-efficacy**
  – A situationally specific form of self-confidence
  – The perception of one’s ability to perform a given task in a specific situation
Psychological Techniques for Improved Performance (continued)

• **Self-efficacy**
  – Derives from a number of sources:
    • Performance accomplishments
    • Vicarious experiences
    • Verbal persuasion
    • Imaginal experience
    • Physiological states
    • Emotional states
Key Point

• Self-efficacy influences people’s choice of activity, their level of effort in that activity, and how much persistence they will have in the face of challenging obstacles.
Psychological Techniques for Improved Performance

• Self-talk
  – A technique used to enhance self-efficacy, aid in directing proper focus, assist in regulating arousal levels, and reinforce motivation.
  – These are the things we say to ourselves, either out loud or in our heads; they can be positive, negative, or instructional.
Key Point

• Relaxation techniques are designed to reduce physiological arousal and increase task-relevant focus. These techniques are of extreme importance when one is executing complex or novel tasks or performing in high-pressure situations.
Psychological Techniques for Improved Performance

• Goal setting
  – Process goals
    • Goals over whose achievement the athlete has control
  – Outcome goals
    • Goals over which the athlete has little control, such as winning
  – Short-term goals
    • Increase the likelihood of success because they are relatively close to the athlete’s present ability level
  – Long-term goals
    • Provide relevance to short-term goals
• Guidelines for using goal setting
  – Long-term goals and short-term goals are interdependent.
  – Long-term goals provide a sense of meaningfulness for pursuing short-term goals.
  – The attainment of short-term goals provides a hierarchical sense of mastery and success that builds self-confidence.
  – Athletes should define process goals to focus on elements of their performance over which they have control.
Enhancing Motor Skill Acquisition and Learning

• Whole versus part practice
  – Whole practice addresses a skill in its entirety
  – Part practice separates the skill into subcomponents:
    • Segmentation breaks the task into subcomponents that have clear breaks between each segment.
    • Fractionalization breaks the task into subcomponents that happen simultaneously.
    • Simplification adjusts the difficulty of the task by changing characteristics such as execution speed or equipment used.
• Whole versus part practice
  – Pure-part training has the athlete practice each subcomponent of a skill multiple times independently.
  – Progressive-part training has an athlete practice two parts in isolation before practicing them together. A third component can then be practiced and all three parts can be done together.
  – Repetitive part training has an athlete practice only the first part in isolation; then each subsequent part is added until the whole task is re-integrated.
• Practice schedule
  – Random practice has an athlete perform multiple skills in random order during a given practice session.
  – Variable practice includes variations of the same skill within a single practice session.
  – Observational learning has an athlete watch prerecorded videos or live demonstrations.
Enhancing Motor Skill Acquisition and Learning (continued)

• Instructions
  – Explicit instructions include prescriptive information that instructs the athlete about the “rules” to effectively execute a given task.
  – Guided discovery provides the athlete with instructions about the overall movement goal and important prompts for task accomplishment, but without explicitly telling the athlete how to accomplish the task.

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Enhancing Motor Skill Acquisition and Learning (continued)

• **Instructions**
  – Discovery instructs the athlete on the overarching goal of the task, and the athlete receives no direction.

• **Feedback**
  – Intrinsic feedback is provided by athletes from their senses, such as the sensory information from missing a box during a squat box jump.
  – Augmented feedback is provided by an observer such as a coach, video, or laboratory equipment.
Enhancing Motor Skill Acquisition and Learning (continued)

• Feedback
  – Knowledge of results is a form of augmented feedback that provides the athlete with information about the execution of the task goal.
  – Knowledge of performance is a form of augmented feedback that provides the athlete with information about his or her movement pattern.
Feedback can be used to facilitate both learning and performance. The timing and frequency of the feedback have different influences on performance and learning. While concurrent feedback is beneficial for competition, delayed feedback that is initially frequent and decreases with time will facilitate learning of complex movement patterns.