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The Impact of Pre-Competition Psychological Training on the Subjective Experiences of College Basketball Athletes

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Abstract

As the competitive level of college basketball continues to rise, the psychological dynamics among athletes have become a crucial factor determining game outcomes. This paper reviews recent empirical studies examining the impact of pre-competition psychological training on the performance of college basketball players. It focuses on two core issues: first, the direct influence of pre-competition psychological training on objective technical performance metrics such as shooting accuracy, rebounds, and assists; Second, its regulatory role on subjective experiences like anxiety levels, emotional stability, and self-confidence, along with the intrinsic connection between these subjective factors and objective performance. The review reveals that systematic pre-competition psychological training significantly improves closed-loop motor skills (e.g., free throws) and optimizes subjective experiences by regulating arousal levels, thereby indirectly enhancing decision-making and execution capabilities during games. This paper aims to provide theoretical support for college basketball coaches in developing scientific psychological training programs.

Keywords

Basketball athletes; Pre-competition psychological training; Sport anxiety.

1. Introduction

Modern competitive sports are not only contests of physical fitness and technical skill but also psychological battles. With the advancement of sports science, the critical role of psychological factors in competitive sports has gained increasing recognition. Contemporary sports psychology research indicates that when physical and technical abilities are comparable, psychological factors become the decisive variable in determining competition outcomes. Athletes must navigate pressures stemming from social environments, match conditions, opponent strength, and self-imposed expectations. Without effective regulation, these pressures often lead to competition anxiety and technical breakdowns. According to the interaction model, athletes' psychological states and the competitive environment engage in complex interactions that directly influence on-court performance.

Pre-competition psychological training refers to systematic interventions targeting specific psychological states before a game, including imagery training, progressive relaxation, and cognitive restructuring. Although extensive research has confirmed the effectiveness of psychological training, findings remain heterogeneous when applied to the specific population of "college basketball players." Some studies report significant effects, while others suggest its efficacy is constrained by individual athlete differences. This paper aims to synthesize existing literature, deeply analyze how pre-competition psychological training influences performance through both subjective psychological experiences and objective technical data, and provide empirical support to establish a scientific basis for designing athlete psychological training programs.

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2. Concept and Research Context of Pre-Competition psychological Training

Psychological training refers to the process of regulating athletes' psychological states and behaviors through conscious, purposeful methods and techniques. Based on timing and objectives, psychological training can be categorized into long-term psychological training and short-term psychological preparation. Long-term psychological training focuses on cultivating stable psychological traits in athletes, such as resilience and self-confidence, while short-term psychological preparation concentrates on regulating athletes' psychological states before and during competitions.

Primary methods include psychological skill training (e.g., goal setting, imagery training, self-suggestion), simulation training, and biofeedback training. Imagery training, also known as psychological rehearsal, involves repeatedly visualizing specific movements or athletic scenarios under guided suggestions to evoke kinesthetic sensations, enhance muscle memory, and improve motor skills and emotional control. During imagery training, athletes must relax, concentrate, and accurately "replay" or "pre-perform" technical movements in their minds from a first-person perspective. Visual-kinesthetic imagery yields optimal results as it simultaneously activates visual and muscle-motor sensory regions. For instance, basketball players can psychologically simulate free-throw sequences—including ball handling, knee bending, and shooting—to reinforce proper motor patterns. Simulation training serves as the core method of pre-competition psychological preparation. By recreating conditions and scenarios closely resembling actual competition, it enhances athletes' on-site adaptability. Simulation training can be categorized into two forms: real-scenario simulation and verbal-imagery simulation. Real-scenario simulation involves replicating authentic conditions such as climate, venue, and audience behavior as closely as possible. Verbal-imagery simulation describes competition scenarios through language, video, charts, and other visual aids. Simulation training primarily impacts athletes in three ways: first, it increases tolerance for competitive pressure; second, it enhances the ability to handle unexpected situations; third, it reduces uncertainty during competition. For instance, when preparing for major events, athletes can participate in warm-up matches, simulate opponents' tactics, or experience audience distractions (like noise or flash photography). This allows them to encounter the competition environment during training and establish a sound motor pattern structure. Biofeedback training utilizes electronic instruments to process and amplify athletes' physiological data (e.g., heart rate, skin conductance, electromyography) before providing immediate, visual feedback. This enables athletes to learn methods for regulating physical and psychological states. Such training allows athletes to objectively understand their psychophysiological condition and consciously adjust these states. These methods influence athletes' cognition, emotions, and behavior through distinct psychological mechanisms, thereby enhancing their competition adaptability.

The impact of psychological training on competition adaptation can be achieved through multiple theoretical mechanisms. According to self-determination theory, fulfilling athletes' needs for autonomy, competence, and relatedness enhances their intrinsic motivation, thereby improving competition adaptation. The iceberg image theory suggests that elite athletes exhibit low anxiety, low tension, low depression, low anger, low fatigue, low drowsiness, and high vitality in their psychological state, forming the foundation for their excellent competition adaptation.

Furthermore, the psychological stress theory posits that appropriate psychological training enables athletes to develop effective coping mechanisms, thereby mitigating the negative impact of competition pressure on performance. These theoretical mechanisms collectively form the foundation for understanding how psychological training influences competition

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adaptation. Jones' research points to a core hypothesis: If athletes enhance their ability to cope with stress through mental skills training, they allocate resources more effectively during critical moments, thereby reducing the likelihood of performance disruption [1].

3. The Impact of Pre-Competition Psychological Training on Athletes' Subjective Perceptions

3.1. Pre-Competition Psychological Training and Competition Adaptation

During athletic activities, athletes are frequently stimulated by various environpsychological factors or events, leading to diverse subjective experiences. Research on psychological changes in athletes during competitive sports has long been a key focus of sports psychology.

According to Lazarus et al.'s interaction theory, individuals undergo two stages of cognitive appraisal: primary appraisal and secondary appraisal, based on the content and severity of the assessment. Following cognitive evaluation, individuals generate responses, coping with stimuli across four dimensions: physiological, psychological, social, and organismic. Coping effectiveness further categorizes responses into adaptive and maladaptive coping [2]. Wang Qingju's research indicates that athletes' cognitive appraisal of stressful events influences their subsequent coping strategies. Once a stressful event is perceived and interpreted, athletes may exhibit either positive or negative reactions [3].

Pre-competition simulation training artificially recreates conditions close to actual competition, enabling athletes to familiarize themselves with the competition process, environpsychological atmosphere, and potential unexpected situations beforehand. Research indicates that athletes undergoing comprehensive simulation training (including real-scenario and psychological imagery simulations) demonstrate a 20-30% improvement in adaptability to competition environments. For instance, when preparing for major events, simulating opponent tactics, arena noise, and referee errors significantly enhances athletes' ability to handle uncertainties during actual competitions, enabling them to enter a competitive state more rapidly.

3.2. Pre-Competition psychological Training and Confidence Levels

When athletes perceive an event as controllable during cognitive evaluation, they exhibit higher confidence levels. A significant positive correlation exists between confidence and athletic performance, with a correlation coefficient of $r=0.75$ ($p<0.01$) between confidence dimension scores and performance scores. This indicates that athletes with higher confidence levels often better navigate challenges during competitions, maintain stable performance states, and achieve superior results [4]. Successful imagery training is a common method for boosting confidence. For instance, basketball player Michael Jordan would meticulously visualize every successful move he would make during a game before competing. This psychological rehearsal enabled him to maintain high focus and confidence during matches. Another effective technique is "planting psychological anchors," which involves helping athletes recall their most successful competition experiences and establishing a conditioned reflex by linking a specific image, word, or action from that experience to the feeling of success. In subsequent competitions, triggering this "psychological anchor" enables athletes to rapidly regain their confident state. Empirical evidence shows that at the 2016 Rio Olympics, weightlifting champion Deng Wei, despite trailing in the snatch event, maintained her confidence above the threshold by using a "tech nical movement checklist" (a cognitive restructuring strategy) designed by her coaching staff, ultimately breaking the world record.

3.3. Pre-Competition psychological Training and Achievement Motivation

According to McClelland's achievement motivation theory, achievement motivation is a stable psychological trait. Building upon McClelland's work, American psychologist Atkinson

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proposed the Expectancy-Value Theory, suggesting that an individual's analysis of the likelihood of achieving a specific goal and their evaluation of the process involved influence their level of commitment to pursuing that goal. Specifically, individuals with a strong drive for success exhibit greater initiative and proactivity during the process, while those motivated by failure avoidance tend to adopt conservative approaches to prevent negative outcomes. In competitive sports, achievement motivation serves as a crucial intrinsic drive for athletes. Research indicates a positive correlation between achievement motivation and athletic performance. Specifically, highly motivated athletes tend to invest more in training and competition, striving for superior results and displays. The correlation coefficient between motivation dimension scores and performance scores is ($r=0.68$, $p<0.01$), indicating that motivation significantly influences athletic performance [5]. Attribution training in psychological coaching helps athletes develop positive explanatory styles. When facing defeat, guiding athletes to attribute failure to controllable factors (e.g., effort level, tactical execution) rather than uncontrollable factors (e.g., referees, luck) helps protect their self-confidence and maintain positive achievement motivation. For example, after losing at the national championships, athlete Nie Dengyu underwent cognitive restructuring through psychological intervention. He reframed the loss as an opportunity to identify problems, regained motivation, and subsequently achieved a personal best in a later competition. Research indicates that athletes who undergo appropriate attribution training demonstrate significantly higher engagement and enthusiasm in post-competition training compared to control groups.

3.4. Pre-Competition psychological Training and Emotional State

Additionally, emotional state represents a significant psychological dimension influencing athletic performance. Research findings indicate that pre-competition anxiety is a crucial psychological variable affecting sports performance. Systematic reviews and meta-analyses consistently demonstrate that psychological training—including relaxation techniques, emotion regulation, and mindfulness—can significantly reduce pre-competition anxiety levels and enhance stress coping abilities [6].

Early studies, such as those by Jones, Hanton, and Conroy, proposed a relational model between anxiety and performance [1]. Subsequent meta-analyses (e.g., Hanton et al., van Cutsem et al.) repeatedly confirmed the anxiety-reducing effects of interventions, demonstrating universality across different sports types. However, the magnitude of these effects is moderated by intervention methods, duration, and execution environments [7]. The correlation coefficient between emotional state scores and athletic performance scores was ($r=0.65$, $p<0.01$), indicating that emotional state significantly influences athletic performance [4].

4. Conclusion

This study examines the effects of pre-competition psychological training on subjective experiences among college basketball athletes. By synthesizing relevant theoretical frameworks and empirical evidence, the paper proposes two core propositions: First, systematic pre-competition psychological training can significantly improve athletes' subjective experiences under certain conditions, particularly by reducing anxiety levels, enhancing emotional stability, and boosting self-confidence; Second, these improvements in subjective experiences indirectly or partially directly enhance objective technical metrics—such as field goal percentage and free throw accuracy—by regulating emotions and boosting motivation and self-efficacy. The article further emphasizes significant heterogeneity in intervention effectiveness, influenced by boundary conditions including content, duration, athlete skill level, and competition context. Achieving generalizable applications thus requires balancing standardized interventions with individualized needs, supported by high-quality

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randomized controlled trials and longitudinal tracking data to validate mediating mechanisms and long-term effects.

References

[1] Jones, G., Hanton, S., & Conroy, D. (2001). Stress and arousal in sport: A test of the predicts-stress model.

[2] Lazarus, R. S. (1999). Stress and Emotion: A New Synthesis. New York: Springer Publishing Company.

[3] Wang Qingju, Chi Lizhong. Pressure Cognitive Appraisal and Coping Process in Competitive Sports [J]. Journal of Wuhan Institute of Physical Education, 2007, (3): 64-68.

[4] Jia Dan, Yang Chenqian. A Study on the Influence and Correlation of Competitive Athletes' Psychological Dimensions on Sports Performance [C]//Shaanxi Provincial Sports Science Society, Shaanxi Provincial Student Sports Association. Compilation of the 4th Shaanxi Provincial Sports Science Theses (Abstracts) — Competitive Sports (Poster Session). Xi'an FanYi University, School of Physical Education; 2025:11.

[5] Xie Bin, Yao Jiaxin. Sociological Analysis of the Causes of Psychological Fatigue and Burnout in Professional Athletes [J]. Journal of Tianjin University of Sport, 2010, 25(03): 234-237.

[6] Birrer, D., Röthlin, P., & Morgan, G. (2012). Mindfulness to improve athletic performance: A systematic review.

[7] Birrer, D., Morgan, G., & Dankert, R. (2018). Psychological skills training in sport: A systematic review and meta-analysis.