

ВЛИЯНИЕ СИТУАЦИОННЫХ ФАКТОРОВ И ИГРОВОГО ДАВЛЕНИЯ НА ПРОЦЕНТ РЕАЛИЗАЦИИ ПЕНАЛЬТИ В ФУТБОЛЕ НА ПРИМЕРЕ АНГЛИЙСКОЙ ПРЕМЬЕР-ЛИГЕ

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Аннотация. В статье проводится анализ основных измерений и правил действия игрового давления и ситуационных факторов, влияющих на показатели реализации пенальти в английской Премьер-лиге. Отражается изучение их синергетического эффекта и вносятся предложения практических стратегий оптимизации для команд премьер-лиге с точки зрения специальной подготовки и тактики на поле.

Ключевые слова: футбол, пенальти, игровое давление, ситуационные факторы.

THE INFLUENCE OF SITUATIONAL FACTORS AND IN-GAME PRESSURE ON PENALTY CONVERSION RATES IN FOOTBALL, FOR EXAMPLE THE ENGLISH PREMIER LEAGUE

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Abstract. This article analyzes the key dimensions and rules of game pressure and situational factors influencing penalty conversion rates in the English Premier League. It examines their synergistic effects and proposes practical optimization strategies for Premier League teams in terms of specific training and on-field tactics.

Keywords: football, penalties, game pressure, situational factors.

Introduction. Undoubtedly, match pressure and situational factors are crucial external variables affecting the English Premier League (EPL) penalty performance. As a high-intensity and highly competitive league, the EPL often sees a single penalty kick determine the outcome of key matches and even league standings. Penalty kicks, a typical closed technical movement in football, require both superb technical ability and strong psychological quality from players. In actual EPL matches, many elite players fail to convert penalties in specific scenarios, a phenomenon that cannot be fully explained by technical factors alone. The psychological pressure from media attention, fan expectations and competitive interests, together with situational variables such as home-away differences, crowd atmosphere and pitch conditions, jointly affect penalty execution.

Existing sports science research confirms that competitive pressure and environmental factors significantly impact athletes' fine motor performance, especially for penalty kicks that demand extreme concentration. Current studies on penalty conversion rates mostly focus on single-factor analysis, lacking systematic exploration of the

combined effects of match pressure and situational factors, which makes it difficult to provide targeted guidance for EPL teams. Leading experts point out that improving players' ability to cope with pressure and adapt to situations is as important as polishing technical skills in penalty training [3]. Thus, analyzing the interaction between match pressure and situational factors in the EPL is of great practical significance for the scientific development of penalty training and tactical formulation.

Purpose of the study — analyze the core dimensions and action rules of match pressure and situational factors affecting EPL penalty kick conversion rates, explore their synergistic effects, and put forward practical optimization strategies for EPL teams from the perspectives of special training and on-field tactics.

Methods and organization of the study. This study takes the influence of match pressure and situational factors on EPL penalty kick conversion rates as the research object, focusing on the EPL's competitive characteristics and the internal relationship between the two external factors and conversion rates. The methods: analysis of scientific and methodological literature, logical analysis, and theoretical analysis.

Research results and their discussion. Match pressure in the EPL refers to the psychological tension of players caused by event value, competition process changes and external expectations [2], showing obvious hierarchical characteristics and exerting negative impacts on conversion rates through three core dimensions: match importance, score dynamics and remaining match time, with pressure intensity positively correlated with the decline of conversion rates. Key matches such as championship deciders bring enormous psychological burden to players, making their psychological arousal level exceed the optimal range and leading to stiff technical movements. A backward score puts players under the pressure of "must score", easily causing impetuous emotions and technical deformation, while stoppage-time penalties, combined with physical fatigue, result in the lowest conversion rate in the whole match. Situational factors are the external environmental conditions faced by players in competitions [1], with home-away status, crowd atmosphere and pitch conditions as the core dimensions, playing a two-way regulatory role in penalty conversion rates. Home advantage, embodied in familiar venues and positive fan support, effectively reduces players' psychological tension and improves conversion rates, while away boos amplify pressure and cause anxiety. High-density crowd atmosphere increases cognitive load and disperses players' attention, while low-density atmosphere helps them concentrate on technical movements. Dry and flat pitches provide stable support for run-up and shooting, while wet and slippery pitches change friction and increase the uncertainty of technical execution, leading to a decline in conversion rates. In actual EPL matches, match pressure and situational factors interact to form a significant pressure-situation superposition effect. The superposition of high pressure and adverse situations leads to a sharp drop in conversion rates, as players' psychological arousal level far exceeds the optimal range and technical execution conditions are poor. Favorable situations can buffer the negative effect of high pressure, making players' psychological state return to a reasonable range and significantly improving conversion rates. The superposition of low pressure and favorable situations brings the highest conversion

rate, as players are in a relaxed state and can give full play to their technical level. When low pressure is combined with adverse situations, the negative impact of the latter is limited due to the stable psychological state of players. Based on the above analysis, targeted strategies to improve EPL penalty conversion rates are proposed from two aspects: special training and on-field tactics. Special training includes pressure simulation training to help players adapt to high-pressure scenarios, diversified situational adaptation training to reduce the interference of adverse environments, and psychological quality training to enhance players' resilience and emotional control ability. On-field tactics involve establishing a hierarchical penalty taker system with core and alternate takers, formulating targeted shooting strategies — conservative strategies for high-pressure and adverse situations and flexible strategies for low-pressure and favorable situations — and strengthening pre-kick psychological guidance to help players concentrate on technical movements rather than match outcomes. In addition, understanding goalkeeper movement patterns and save habits can also assist penalty takers in improving conversion rates, as relevant research has analyzed the characteristics of goalkeeper movements in penalty kicks and their impact on save success.

Conclusions. Thus, theoretical analysis proves that match pressure is an important external factor affecting EPL penalty conversion rates, with its negative impact reflected in match importance, score dynamics and remaining match time, which is consistent with the Yerkes-Dodson Law. Situational factors play a key regulatory role, with favorable situations improving conversion rates by alleviating psychological pressure and optimizing technical conditions, and adverse situations reducing conversion rates by amplifying pressure and increasing technical uncertainty [1]. These two factors have a significant, overlapping effect on penalty conversion rates. The key for Premier League teams to improve their penalty conversion rates is to enhance their players' comprehensive ability to cope with pressure and adapt to situations through optimized, specific training and scientific tactics on the pitch [3]. Only the coordinated improvement of psychological quality and technical ability can help teams maintain a stable conversion rate in different scenarios, which is the core direction of the scientization of EPL penalty training.

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