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ABSTRACT

# Unveiling the Best: Goalkeeper Contributions to Build-Up Play in the 2022 FIFA World Cup

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## I. INTRODUCTION

In modern football, the role of the goalkeeper has expanded significantly beyond traditional shot-stopping responsibilities. Goalkeepers are now integral to a team's overall strategy, contributing to build-up play and helping manage pressure during transitions. This evolution reflects tactical shifts that demand greater technical skill, vision, and composure from goalkeepers in both defensive and offensive phases of play. This study investigates goalkeeper contributions in the 2022 FIFA World Cup, emphasizing their build-up play under pressure and influence on match outcomes [1]. Existing research has largely focused on conventional defensive metrics, often overlooking distribution techniques and broader performance comparisons. As such, there is a need for a more comprehensive framework to evaluate the goalkeeper's multifaceted role in modern football [2].

## II. METHODS

This study employed a systematic observational approach to analyze goalkeeper performance in the 2022 FIFA World Cup. Match footage from all 64 games was examined using Nacsport video analysis software to evaluate technical and tactical goalkeeper behaviors, particularly their distribution under pressure. A total of 41 goalkeepers were included in the analysis. A structured coding scheme and a match observation leveled board were developed to ensure consistent data collection across all matches. Variables assessed included type, direction, and success rate of goalkeeper distributions under opponent pressure. Observational criteria were defined based on existing literature and refined through pilot testing. A reliability value above 0.80 was achieved and maintained, indicating high reliability of the coding process. Any discrepancies were reviewed and resolved through consensus discussion. Descriptive statistics were used to summarize performance trends, while Mann-Whitney U tests were conducted to identify statistically significant differences in distribution performance between goalkeepers from winning and losing teams.

## III. RESULTS AND DISCUSSION

### A. Analyze Goalkeeper Contributions in Team Build-Up Under Opponent Pressure

Goalkeepers primarily employed long passes, throws, rolls, goal kicks, and drop kicks under pressure. Short passes, throws, and rolls proved most effective in maintaining

possession. High-performing goalkeepers, such as Emiliano Martínez, exhibited fewer distribution errors and more consistent success under pressure, distinguishing themselves clearly from their lower-performing counterparts.

### B. Determine the Relationship Between Goalkeeper Contributions and Match Outcomes

Teams with goalkeepers who executed accurate distributions and minimized errors had better match outcomes. Statistical analysis showed significant links between distribution metrics and team success, with large effect sizes. Few outliers emerged, reinforcing the trend that successful goalkeeper involvement in build-up play positively influenced performance, as exemplified by Martínez's reliable under-pressure distributions.

TABLE I  
DIFFERENCES BETWEEN ELITE AND NON-ELITE GOALKEEPERS

Variables	Effect Size	p-value
1v1 duels unsuccess	0.6250	0.005*
Interceptions unsuccess	0.5429	0.016*
Long passes unsuccess	0.8393	< 0.001*
Goal kick unsuccess	0.5429	0.022*
Catching unsuccess	0.6107	0.008*
Diving saves unsuccess	0.6536	0.006*
Punching unsuccess	0.4250	0.040*

\*Significant at  $p < 0.05$

The analysis revealed large to very large effect sizes across key goalkeeper performance metrics, illustrating clear distinctions between elite and lower-tier goalkeepers. The most striking finding was the disparity in unsuccessful long passes ( $r = 0.839$ ,  $p < 0.001$ ), highlighting top goalkeepers' superior distribution accuracy and situational awareness in initiating possession-based play under pressure, a role increasingly vital in modern tactics [3]. Similarly, significant differences were found in unsuccessful 1v1 duels ( $r = 0.625$ ,  $p = 0.005$ ), interceptions ( $r = 0.543$ ,  $p = 0.016$ ), goal kicks ( $r = 0.543$ ,  $p = 0.022$ ), catching ( $r = 0.611$ ,  $p = 0.008$ ), and diving saves ( $r = 0.654$ ,  $p = 0.006$ ). These results suggest that elite goalkeepers excel not only in technical execution but also in positioning, timing, and decision-making during dynamic,

high-pressure situations. This aligns with broader research emphasizing the goalkeeper's role in defensive coordination and game management [4]. Even unsuccessful punching showed a moderate effect size ( $r = 0.425$ ,  $p = 0.040$ ), indicating that higher-level goalkeepers demonstrate better aerial command and clearance under pressure—critical skills for managing set-piece threats and crowded penalty areas [5].

#### IV. CONCLUSIONS

The analysis of goalkeeper performance during the 2022 FIFA World Cup highlights the increasingly multifaceted role of goalkeepers in modern football. Beyond traditional shot-stopping, goalkeepers significantly influenced team outcomes through their distribution accuracy, decision-making under pressure, and defensive command. The data revealed that successful teams relied heavily on short, precise passes initiated by goalkeepers, underlining their strategic importance in structured build-up play. Significant differences in long pass accuracy, 1v1 duels, interceptions, goal kicks, and various defensive actions further demonstrate that elite goalkeepers not only excel in technical execution but also in spatial awareness, anticipation, and composure under high-pressure scenarios. These findings confirm that goalkeeper involvement is no longer limited to the defensive third but extends into active participation in team tactics and transitions. As such, performance evaluation frameworks must evolve to include distribution metrics, pressure management, and error minimization. Training programs should prioritize technical distribution skills, aerial control, and communication to align with the demands of high-level competition. Ultimately, the goalkeeper's ability to balance defensive reliability with offensive initiation stands out as a defining factor in elite team performance.

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