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## **EXTENDED ABSTRACT**

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# COMPARATIVE ANALYSIS OF PERFORMANCE INDICATORS BETWEEN WINNING AND LOSING TEAM IN FEMALE HANDBALL OLYMPIC GAMES TOURNAMENT 2012

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## I. INTRODUCTION

Handball is a fast-paced team sport that requires a combination of physical strength, technical skills, and strategic play. The outcome of a match, whether a team wins or loses depends on various factors, including team performance, tactical execution, and psychological resilience. Winning in handball is often associated with superior teamwork, effective offensive and defensive strategies, and high levels of player motivation [1]. The purpose of this study was to analyse a comparative analysis of performance indicators between winning and losing team in female handball Olympic games 2012. Performance indicators pass rate, defensive block, turnovers, foul count, goalkeeper saves, rebounds, shot accuracy and penalty efficiency [2]. The problem statement on offensive play in handball provides valuable insight but has notable limitations. The reliance on basic statistics like the Mann-Whitney U test may oversimplify the complex dynamics of handball games [3].

## II. METHODS

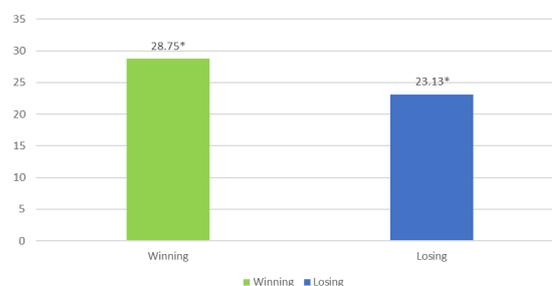
Performance indicators were collected from video footage of the female handball Olympic Games Tournament 2012 available on YouTube. A methods approach was employed, using content analysis to qualitatively assess offensive and defensive strategies. Quantitative data were analyzed using SPSS to identify significant performance indicators differentiating winning and losing teams. This integrated analysis provided a comprehensive understanding of dynamic match factors influencing game outcomes.

## III. RESULTS

A total of 8 matches were examined and analysed according to the selected categories, providing detailed understanding and analyses for each variable which is pass rate, defensive block, turn over, foul count, goalkeeper saves, rebounds, shot accuracy and penalty efficiency.

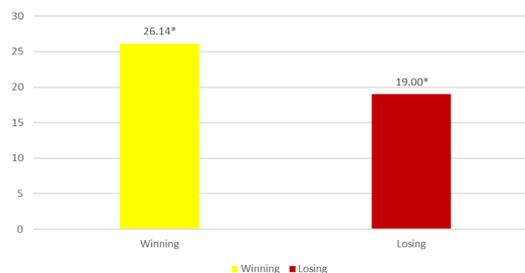
There was a significant difference in pass rate between the winning and losing teams with a mean and standard deviation winning team ( $28.8 \pm 5.18$ ) and losing team ( $23.1 \pm 2.80$ ) with  $t = 2.70$ ;  $p = 0.021$  (Figure 1).

There was a significant difference in defensive blocking between the winning and losing teams with a mean and standard deviation winning team ( $26.1 \pm 5.57$ ) and losing team ( $19.0 \pm 5.37$ ) with  $t = 2.61$ ;  $p = 0.021$  (Figure 2).



\* $p < 0.05$

Fig. 1 Comparison between Winning and Losing team on Pass Rate



\* $p < 0.05$

Fig. 2 Comparison between Winning and Losing team on Defensive Blocking

## IV. DISCUSSION

The winning team made more attempts and used their high pass rate to their advantages. Highlighted that elite players' advanced passing skills enhance possession and scoring opportunities, aligning with this study emphasis on accurate passing for match success [4].

The winning team used solid defensive blocking to stop their opponent and take control of the game. The superior blocking efficiency prevents scoring and boosts

psychological advantage, reinforcing this study focus on defensive strategies for success [5].

#### V. CONCLUSIONS

This study highlights the critical role of offensive and defensive strategies in determining match outcomes in female handball. Winning teams consistently displayed superior adaptability, shooting accuracy, and transitions. Integrating qualitative and quantitative analyses proved valuable in developing predictive models, offering insights into performance optimization in competitive handball.

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