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EXTENDED ABSTRACT

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ANALYSIS OF BACKHAND SERVE ERROR IN MALE DOUBLES BADMINTON ATHLETES BETWEEN WINNING AND LOSING TEAM AT THE YONEX DUTCH JUNIOR INTERNATIONAL 2024

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I. Introduction

The backhand serve is a critical skill in badminton doubles, where precision significantly impacts match outcomes [1]. Despite its importance, limited research examines serve errors in junior-level competitions, particularly in male doubles [2]. This study analyses backhand serve errors at the YONEX Dutch Junior International 2024, identifying error types and comparing their occurrence between winning and losing teams.

II. Methods

Fifty-five male doubles badminton matches from the YONEX Dutch Junior International 2024 were analysed. Video recordings from YouTube were used to scrutinise backhand serve errors, including too high, undirected, fault, out, and stuck serves. Data were systematically documented in SPSS, with independent sample t-tests applied to compare errors between winning and losing teams. The analysis focused on identifying critical serve errors that influence match outcomes, ensuring detailed insights into serve performance during competitive play.

III. Results and Discussion

Undirected serves were the most frequent error, occurring up to 18 times in the analysed matches. This error, caused by improper grip, stance, or psychological stress, allowed opponents to easily return the shuttle and gain an advantage [3]. The second most frequent error was too high serves, often resulting from misjudged flick serves, which gave opponents an immediate attacking opportunity [4]. Both errors highlight the need for technical precision and mental composure to reduce unforced mistakes during matches.

The analysis revealed a significant difference in fault errors between winning and losing teams (p = 0.028), with losing teams committing more faults (1.07 ± 0.66) compared to winning teams (0.80 ± 0.62). This occurred due to a lack of experience among junior players, who struggled with technical consistency under pressure [5]. Without sufficient exposure to competitive scenarios, players were more prone to making serve faults, highlighting the need for targeted training to improve serve accuracy and mental resilience.

A significant difference was also found in stuck errors (p<0.001), with losing teams making more stuck errors (1.38 ± 0.78) than winning teams (0.67 ± 0.61). This was primarily due to emotional stress and limited competitive exposure, as players under pressure often failed to execute serves effectively [6]. The inability to manage stress during critical moments led to poor serve execution, emphasising the importance of mental training to enhance emotional control and performance consistency.

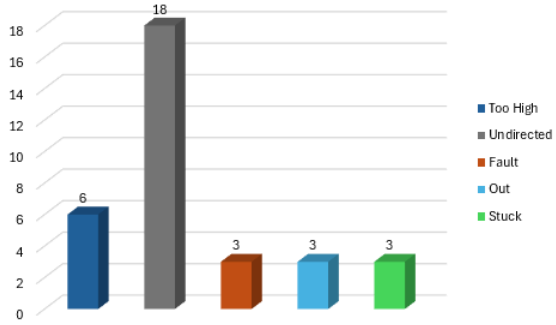

Fig. 1 Frequency variable backhand serve error

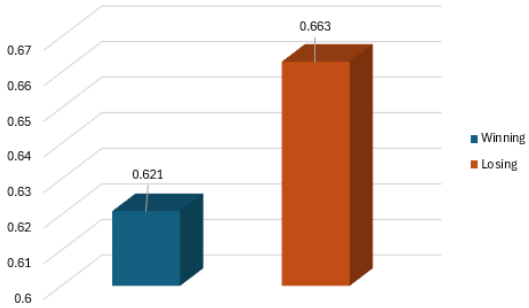

Fig. 2 Comparison mean between winning and losing on fault error

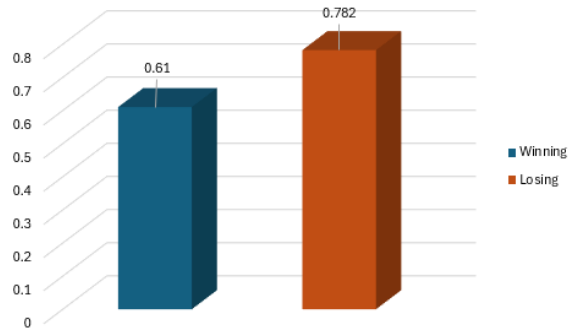

Fig. 3 Comparison mean between winning and losing on average stuck error

IV. Conclusions

Stuck and fault errors significantly influenced match outcomes in male doubles badminton at the YONEX Dutch Junior International 2024. Losing teams exhibited higher frequencies of these errors, with stuck and fault errors showing statistical significance. These results emphasize the critical need to address specific serve errors for improved performance, highlighting the importance of technical precision and mental resilience in competitive play.

Acknowledgment

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