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**EXTENDED  
ABSTRACT**

# Effects of Strapping Application on Agility Performance Among Rugby Players

Ahmad Danish Aliff<sup>1</sup>, Aizzat Adnan<sup>1</sup>, Adam Linoby<sup>1</sup>, Razif Sazali<sup>1</sup>, Muhammad Zulqarnain<sup>1</sup>, Yusandra Md Yusof<sup>1</sup>, & Muhammad Amrun Haziq Abidin<sup>1\*</sup>

<sup>1</sup>Faculty of Sports Science and Recreation, Universiti Teknologi MARA, Negeri Sembilan Branch, Seremban Campus, Negeri Sembilan, MALAYSIA

\*Corresponding author: amrun@uitm.edu.my

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## I. INTRODUCTION

Strapping is commonly used in rugby to enhance joint stability and reduce injury risk, yet its impact on agility remains underexplored [1]. This study investigates whether strapping affects agility performance among rugby players. By comparing performance with and without strapping, the research aims to clarify its functional implications and inform evidence-based practices for training and injury prevention.

## II. METHODS

Sixteen amateur male rugby players aged 13–15 from Victoria Institution Rugby Club completed the T-Test agility protocol under two conditions: with and without strapping. Rigid athletic tape was applied using the closed basketweave technique to the ankle [2]. Each player performed the test with a stopwatch measurement. Trials were randomized and counterbalanced to ensure unbiased comparison of agility performance between conditions.

## III. RESULTS AND DISCUSSION

### A. Descriptive Statistics

The descriptive statistics show that the "No Strapping" group had a slightly higher mean age (14.9 years) and weight (65.0 kg) compared to the "Strapping" group (14.5 years and 61.3 kg), while both groups had almost identical average heights (168.6 cm and 168.4 cm, respectively). The Shapiro-Wilk test for normality revealed that age data for both groups were not normally distributed ( $p < 0.001$ ), while height data in both groups were normally distributed ( $p = 0.871$  for No Strapping and  $p = 0.326$  for Strapping). Weight was normally distributed in the Strapping group ( $p = 0.297$ ) but not in the No Strapping group ( $p = 0.025$ ). These results suggest that most variables are approximately similar between the two groups, with slight differences in age and weight, and that some data distributions deviate from normality, which should be considered when interpreting statistical analyses.

TABLE I  
DESCRIPTIVE STATISTICS FOR AGILITY PERFORMANCE

Variable	Group	N	Mean	SD
Age	No strapping	8	14.9	0.35
	Strapping	8	14.5	0.54
Height	No strapping	8	168.6	3.62
	Strapping	8	168.4	3.66
Weight	No strapping	8	65.0	8.38
	Strapping	8	61.3	7.03

### B. Comparison Between Strapping vs Non Non-Strapping on Agility

Players with strapping averaged 10.30s versus 10.80s without strapping, but the difference was not statistically significant ( $p = 0.269$ ). The findings suggest strapping may offer joint support without enhancing agility. This result may be due to limited ankle mobility caused by the strapping technique, which can restrict natural movement [4], and the structured nature of the T-Test, which may not reflect real-game reactive agility demands [5].

TABLE 2  
INDEPENDENT SAMPLES T-TEST FOR BEST TIME BETWEEN STRAPPING VS NON-STRAPPING ON AGILITY

Variable	Mean	SD	t(df)	p
Best time	-0.456	0.397	-1.15(14)	0.269

## IV. CONCLUSIONS

Ankle strapping did not significantly affect agility performance among amateur rugby players. While it may support injury prevention, it does not enhance performance in structured agility tasks. Coaches should consider using strapping primarily for protection rather than performance enhancement.

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