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Comparison Between Wearing Kinesiology Tape and Rigid Tape on Agility and Muscular Endurance Among Football Athletes

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I. INTRODUCTION

Performance and injury prevention are important considerations in football. Kinesiology tape (KT) and rigid tape (RT) are commonly used by athletes to support performance and joint stability. KT is characterised by its elasticity, which allows dynamic movement and may enhance proprioception, whereas RT is non-elastic and is mainly used for joint immobilisation and mechanical support. Although both tapes are popular, debate remains regarding which type is more appropriate for high-performance sports such as football. Therefore, this study aimed to compare the acute effects of wearing KT and RT on agility and muscular endurance among amateur football players.

II. METHODS

A crossover repeated-measures experimental design was conducted involving 15 male amateur football athletes aged 20-27 years. Participants completed two functional tests: the 505 Agility Test and the Lateral Jump Test. Each participant performed the tests under two conditions: (1) wearing kinesiology tape and (2) wearing rigid tape. To avoid carry-over effects, a washout period of 24 to 48 hours was implemented between the two testing sessions. Data were analysed using Jamovi (Version 2.3). The paired-samples t-test was used for normally distributed data, while the Wilcoxon signed-rank test was applied for non-normal data to determine differences between the two conditions.

III. RESULTS AND DISCUSSION

The results indicated a significant difference in performance between the two taping conditions. For agility, participants recorded a significantly faster time when wearing KT ($M = 2.45 \pm 0.16$ s) than when wearing RT ($M = 2.50 \pm 0.16$ s), with $p < .001$. Similarly, for muscular endurance, the number of repetitions in the Lateral Jump Test was significantly higher with KT ($M = 56.53 \pm 9.05$ repetitions) than with RT ($M = 50.93 \pm 9.11$ repetitions), with $p < .001$.

TABLE I
COMPARISON OF AGILITY AND MUSCULAR ENDURANCE
BETWEEN KT AND RT

		Statistic	df	P	Mean Difference
Kinesiology Tape	Rigid Tape	25.7120	14.0	<.001	5.5333
				<.001	5.5000

Table 1 shows that kinesiology tape significantly enhanced both agility and muscular endurance among amateur football athletes compared with rigid tape.

IV. CONCLUSIONS

This study concludes that kinesiology tape (KT) produced better agility and muscular endurance performance among amateur football athletes than rigid tape (RT). The elasticity of KT likely allows a fuller range of motion while providing neurosensory feedback, both of which are important for rapid changes of direction and sustained muscular contractions. In contrast, the mechanical restriction of RT may limit the fluid movements required in football. Coaches and sports therapists are therefore encouraged to consider KT as a supportive strategy to optimise athletic performance.

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