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COLLOQIUM PROCEEDINGS

EXTENDED ABSTRACT

Effect of FIFA11+ Level 3 on Speed and Reaction Time of Amateur Soccer Players

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I. Introduction

The FIFA 11+ program is globally endorsed for injury prevention in soccer [1]. However, its performance-enhancing potential, especially at Level 3, which includes high-intensity drills and cognitive elements, remains underexplored [2]. Thus, this study aims to examine the effects of FIFA 11+ Level 3 on speed and reaction time in amateur soccer players and to compare the outcomes with those of a traditional warm-up routine. Insights from this study can support evidence-based training strategies, specifically for improving key performance metrics in amateur athletes.

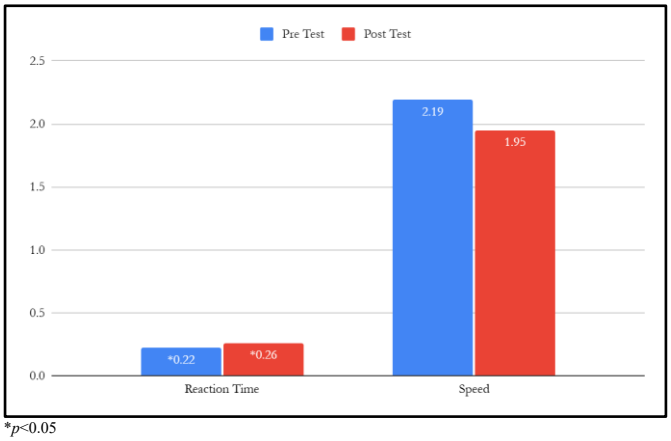
II. Methods

A total of 16 male amateur soccer players (aged 19–23) were randomly assigned to one of two groups: the FIFA 11+ Level 3 warm-up group or the traditional warm-up group. Participants were assigned to groups based on their pre-test scores to ensure both groups had comparable skill levels. Speed and reaction time were measured before and after the intervention. Speed was assessed using a 10-meter sprint test, while reaction time was evaluated using the Multi-Operational Apparatus for Reaction Time. The data were analyzed using paired sample t-tests to assess within-group changes and independent sample t-tests to compare between-group differences.

III. Results and Discussion

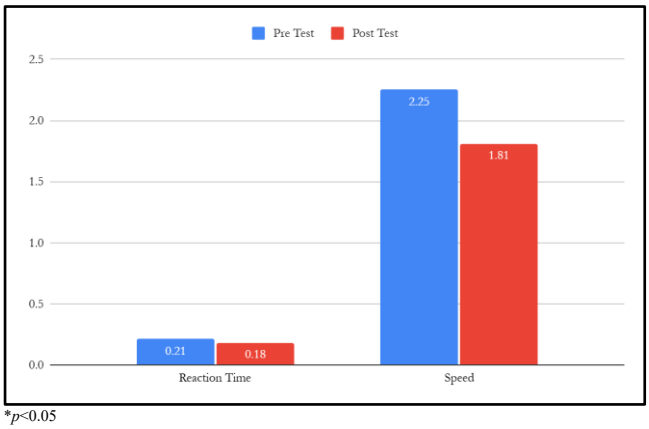
A. Effect of FIFA 11+ Level 3 and Traditional Warm-Up on Speed and Reaction Time

The FIFA 11+ Level 3 warm-up group demonstrated a statistically significant speed improvement, with mean performance time decreasing from 2.19 ± 0.14 seconds to 1.95 ± 0.16 seconds ($p < 0.05$). In contrast, reaction time showed a slight increase from 0.22 ± 0.07 seconds to 0.26 ± 0.05 seconds; however, this change was not statistically significant ($p > 0.05$). These results indicate that the program is effective in enhancing short-distance sprint performance but may not provide sufficient stimulus to improve neuromuscular responsiveness related to reaction time. In the traditional warm-up group, a statistically significant improvement was observed in speed, with mean performance time decreasing from 2.25 ± 0.12 seconds to 1.81 ± 0.23 seconds ($p < 0.05$). Although reaction time also showed a reduction, from 0.21 ± 0.02 seconds to 0.18 ± 0.05 seconds, this change was not statistically significant ($p > 0.05$).



*$p<0.05$

Fig. 1 Effect of FIFA 11+ Level 3 on Speed and Reaction Time.



*$p<0.05$

Fig. 2 Effect of Traditional Warm-Up on Speed and Reaction Time.

B. Comparison Between FIFA 11+ Level 3 and Traditional Warm-Up

Results from the Independent Samples t-test indicated no statistically significant differences between the FIFA 11+ Level 3 group and the traditional warm-up group in both speed and reaction time, with $p > 0.05$. However, descriptive analysis suggests that the traditional warm-up group exhibited greater improvements in both variables compared to the FIFA 11+ Level 3 group.

TABLE I
COMPARISON BETWEEN FIFA 11+ LEVEL 3 AND TRADITIONAL WARM-UP

Variables	Group	Mean (SD)	t	df	Sign. (2-tailed)
Speed	FIFA11+ Level 3	-0.24±0.22	1.85	14	0.09
	Traditional Warm-up	-0.44±0.21			
Reaction Time	FIFA11+ Level 3	0.04±0.08	2.16	14	0.049*
	Traditional Warm-up	-0.04±0.05			

*$p < 0.05$

IV. CONCLUSIONS

The findings of this study revealed that the FIFA 11+ Level 3 warm-up led to improvements in reaction time among amateur soccer players. However, these improvements were not greater than those observed in the traditional warm-up group. This suggests that while FIFA 11+ Level 3 warm-up has performance-enhancing potential, it may not be more effective than traditional warm-up methods in eliciting measurable gains in reaction-based outcomes. One possible explanation for this limited effectiveness is the nature of FIFA 11 Plus as a warm-up protocol, rather than a long-term or intensive neuromuscular training program. Although Level 3 incorporates high-intensity and cognitive components, its short duration and one-off application in this study may not have been sufficient to induce significant neuromotor adaptations. Previous research has shown that sustained and targeted interventions are typically required to improve cognitive and reaction-time performance [3]. Therefore, while FIFA 1+ Level 3 warm-up demonstrates promise, its use as a standalone session may not provide a substantial advantage over traditional warm-up practices.

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