



RELATIONSHIP BETWEEN DYNAMIC BALANCE AND AGILITY IN AMATEUR SOCCER PLAYERS: A CORRELATIONAL STUDY

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ABSTRACT **Background:** Agility and dynamic balance are crucial for soccer performance, influencing movement efficiency and injury prevention. Despite their importance, the extent of their relationship remains unclear in amateur soccer players. **Objective:** To investigate the correlation between dynamic balance and agility in amateur soccer players using the Y-Balance Test (YBT) and 5-10-5 Agility Test. **Methods:** A correlational study was conducted with 42 male amateur soccer players (aged 18–25 years). Participants performed the YBT for dynamic balance and the 5-10-5 agility test. Three trials were recorded, with mean values analyzed using Pearson's correlation coefficient. **Results:** Right-YBT scores showed a weak positive correlation with agility ($r = 0.228$), while Left-YBT scores had an even weaker correlation ($r = 0.167$). Leg dominance did not significantly influence agility performance. **Discussion:** Dynamic balance has only a minor influence on agility in amateur soccer players. Training programs should incorporate strength, plyometrics, and neuromuscular drills alongside balance exercises for optimal agility development.

KEYWORDS :

INTRODUCTION

Football (soccer) is the most widely played sport worldwide, with more than 250 million players across 200 nations. The game requires strength, agility, balance, endurance, and coordination. Players frequently change directions, sprint, and decelerate, making agility and dynamic balance critical components for performance and injury prevention.

Dynamic balance is the ability to maintain postural control during movement or while transitioning between movements. Agility is defined as the ability to accelerate, decelerate, and rapidly change direction in response to game demands. In football, both qualities are essential: balance allows effective control of body mechanics, while agility ensures players can adapt quickly to unpredictable match situations.

Previous research has established a connection between balance and agility in sports such as basketball and handball. Despite these findings, limited evidence exists regarding amateur soccer players. Given the importance of agility for performance and injury prevention, understanding whether dynamic balance influences agility is vital. This study aims to investigate the relationship between dynamic balance and agility in amateur soccer players using the Y-Balance Test (YBT) and the 5-10-5 agility test.

MATERIALS & METHODS

Design & Setting: Correlational study at D.Y. Patil University School of Physiotherapy.

Participants: 42 male amateur soccer players, aged 18–25 years.

Inclusion/Exclusion Criteria: As defined in research protocol.

Outcome Measures: Y-Balance Test (dynamic balance), 5-10-5 Agility Test (agility).

Procedure: Three trials per test, mean used for analysis.

Statistics: Pearson's correlation coefficient using SPSS 20.

RESULTS

Mean Age: 22.17 ± 1.83 years.

BMI: 21.99 ± 2.01 kg/m².

Right-dominant: 83.3%.

Correlations:

Right-YBT Vs Agility: $r = 0.228$ (weak positive).

Left-YBT Vs Agility: $r = 0.167$ (very weak positive).

DISCUSSION

The present study revealed only a weak positive correlation between

Y-Balance Test (YBT) scores and 5-10-5 agility test performance (Right-YBT $r = 0.228$; Left-YBT $r = 0.167$). These results suggest that although balance contributes to stability during rapid movements, agility performance is largely influenced by additional factors such as strength, power, and neuromuscular coordination.

Comparison With Previous Research: Our results align with prior studies showing modest correlations between balance and agility in athletes. Stronger associations have been reported in basketball and handball players, suggesting that sport-specific demands influence this relationship.

Biomechanical Considerations: Agility requires deceleration, directional change, and re-acceleration, which depend heavily on strength and neuromuscular efficiency. Balance plays a supportive role but cannot fully predict agility performance.

Strengths And Limitations: Strengths include focus on amateur players. Limitations include small sample size, cross-sectional design, and use of a closed-skill agility test.

Practical Implications: Balance training should be combined with strength, plyometric, and neuromuscular drills for optimal agility development and injury prevention.

CONCLUSIONS

Dynamic balance shows weak correlation with agility in amateur soccer players. A multidimensional training approach combining balance, strength, plyometrics, and neuromuscular drills is recommended.

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