

SOCCKER SPRINT AND AGILITY ARE SIMILAR BETWEEN PRE- AND POSTPUBESCENT BOYS, WHEN BALL IS CONSIDERED

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INTRODUCTION

Scientific evidence suggests that specific physiological demands and anthropometrical prerequisites result in the selection of young players based on enhanced physiological performances and anthropometrical advantage (1). However, the competitive demands are not the same in youth categories, inducing different physical and physiological profiles from those of adult players (2). The purpose of the present study was to analyze possible differences in speed, agility and jump height of pre- and postpubescent soccer players.

METHODS

Thirty-two boys, divided in pre- and postpubescent groups (GR1: n=16; Tanner stage = 2; age 11.1±0.3 years; body mass 38.9±3.5 kg vs. GR2: n=16; Tanner stage = 4; age 14.4±0.5 years; body mass 63.4±8.6 kg), took part in a cross sectional study design.

Shortest time in a 20-m sprint (with and without the ball), shortest time in a 20-m agility test (with and without the ball), and maximum height in countermovement jump were assessed for each participant. Ball influence in sprint and agility test was estimated by the differential of time percentage. Means were compared with independent samples *t* test and Cohen's *d* was used for all comparisons to assess the difference effect size.

RESULTS

Postpubescent boys were faster in both the sprint (with ball: 3.9±0.2 vs. 4.2±0.2 s, $p < 0.001$, $d = 1.40$; without ball:

3.5±0.2 vs. 3.8±0.2 s, $p = 0.001$, $d = 1.34$) and the agility test (with ball: 8.3±0.4 vs. 8.7±0.4 s, $p = 0.011$, $d = 0.95$; without ball: 6.9±0.2 vs. 7.2±0.6 s, $p = 0.008$, $d = 1.01$), and jumped higher (34.1±3.7 vs. 29.4±4.6 cm, $p = 0.004$, $d = 1.11$) than the prepubescent cohort. No statistical differences were observed in the differential of time percentage ($p = 0.913$ for sprint and $p = 0.877$ for the agility test), being slower when ball is included (sprint: -9.1±3.8%, $p < 0.001$, $d = 1.51$; agility test: -17.9±4.2%, $p < 0.001$, $d = 3.83$).

DISCUSSION

The number of studies evaluating prepubescent soccer players is scarce (2). Nevertheless, understanding the changes induced by the maturation process, may lead to a more appropriate training prescription. As hypothesized, the postpubescent boys were faster, more agile and jumped higher. However, the relative values presented very high similarities between groups (i.e. both groups were equally slower when ball was included in the tests). Despite a physical test is not sensitive enough to predict on-field performance (1), evaluations of relative skill processes (e.g. sprinting with or without ball) may give new insights for the training prescription at these ages.

REFERENCES

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