CROSS-SECTIONAL STUDY OF PHYSICAL ABILITY IN PLAYERS SELECTED FOR THE YOUTH TEAM OF A "J-LEAGUE" SOCCER CLUB

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Introduction

This study examined the physique, physical fitness and motor ability of soccer players, especially junior youth and youth players of "J-League" clubs, using relatively common field test items. We also compared the physique, physical fitness and motor ability between those who were promoted and those who retired from clubs for each generational category in an attempt to identify factors that significantly influence selection to higher categories.

Methods

The study subjects were 213 male soccer players who were affiliated to a team (aged 19 years or older) in "J-League" or its subsidiary clubs, including the youth team (16-18 years) and the junior youth team (13-15 years).All subjects were compared for the following items: body height, body weight, percentage body fat, 10-m run, 30-m run, 50-m run, shuttle run (10 m × 5), STEP 50, vertical jump, standing five-step jump, and multi-stage shuttle run. The measurements were also compared between those who were promoted and those who retired from the club for each category using the t-test and discrimination analysis.

Results & Discussion

The results revealed that the factors of physique, physical fitness and motor ability that significantly influenced the promotion or retirement of junior youth and youth players were those related to physique (especially body weight), speed and agility (Table1). Power-related factors were more important in youth players, but were less influential than the above-mentioned factors. The influence of endurance-related factors appeared to be even smaller.

Table 1. Physiological characteristics of select and selected players (mean±SD)

Test	Junior Youth		Youth		Professional	
	Selected	Non-selected	Selected	Non-selected	Selected	Non-selected
10m Sprint (s)	1.81±0.09*	1.89±0.11	1.80±0.05	1.82±0.08	1.75±0.09*	1.80±0.08
30m Sprint (s)	4.36±0.15*	4.51±0.22	4.26±0.11*	4.34±0.16	4.16±0.16*	4.26±0.14
50m Sprint (s)	6.76±0.53*	7.12±0.37	6.63±0.16*	6.76±0.25	6.46±0.25*	6.65±0.20
10m×5 Shuttle Run (s)	11.65±0.29*	12.11±0.34	11.15±0.39*	11.42±0.35	10.85±0.46*	11.09±0.32
Step 50 (s)	15.19±0.79*	15.85±0.81	14.27±0.81*	14.73±0.63	13.72±0.75	13.88±0.74
Vertical Jump(cm)	54.5±4.9	55.0±8.1	62.8±5.3*	59.0±4.7	68.9±4.7*	63.7±5.5
5 Step Jump (m)	11.26±0.77	11.08±0.8	12.40±0.79	12.12±0.67	13.04±0.56*	12.67±0.57
Multistage Shuttle Run(n)	118.9±13.3	115.4±12.8	132.8±11.8	130.2±9.3	115.8±16.4	121.1±12.6

(* P<0.05)

Conclusion

The field test items used in the present study are considered valuable for use in training practice in that they can be performed relatively easily and allow selective factors for each category to be determined to some extent.