Anthropometric and performance differences among playing positions between Italian and American high school football players

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Height, body weight and body composition are different among American football players and this is due to the different movement demands for each playing position (1). The results of the National Football League (NFL) Combines are different for playing position and they are used by coaches and scouts to assess players' physical abilities as a determinant of their success in the professional level (2). The purpose of this study was to examine anthropometric and performance differences among young football players of a top Italian team (Rhinos Milan) and to compare these values with the American high school football players. Participants (N=62) were categorized by position in 3 groups based on playing position: Skill players (SP) included wide receivers, cornerbacks, safeties, and running backs; Big skill players (BSP) consisted of fullbacks, linebackers, tight ends, and defensive ends; Lineman (LM) included centers, offensive guards, offensive and defensive tackles. Body weight and percentage of body fat were determined using the TANITA Body Composition Monitor BC-418 and we obtained performance results of the following Nike SPARQ Combine drills: 40-yard dash, vertical jump, 20-yard shuttle and the kneeling power ball toss (KPBT). The one-way ANOVA followed by the Tukey-Kramer post-hoc test showed significant differences for all the variables among the 3 playing categories: LM had higher anthropometric and body composition values than SP (p<0.001) and BSP (p<0.01) while they performed significantly worse in the physical tests, except for the KPBT (p<0.01). We calculated and compared the 95% confidence limits for each anthropometric and physical test parameter of Italian and American players: American high school players had higher values for all the anthropometric and physical tests variables than Italian players (p<0.001). Administrators of professional football teams in Italy need to improve players' physical attributes so the gap that currently exists between Italy and USA can be reduced.

References

[1] Kraemer et al. (2005) Body size and composition of National Football League players. J Strength Cond Res 19: 485–489.
[2] Sierer et al. (2008) The national football combine: performance differences between drafted and nondrafted players entering the 2004 and 2005 drafts. Journal of Strength and Conditioning 22(1): 6-12.