

Physical Characteristics of the Algerian Goalkeepers

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Abstract: The aim of this study is to determine the characteristics anthropometric and physical Algerian goalkeepers, who all have achieved the test of Wameval, the vertical jump (CMJ, SJ) on a punt of strength (Ergo Tester Globus, Italy), the 20m coordination speed test of Cazorla, and the Wingate test on ergometric bicycle (Monark, Model 834 E) with a braking force of 75 g/kg^{-1} of body mass.

Key words: Goalkeeper, physical characteristics, sport performance.

1. Introduction

The goalkeeper is a particular player who often plays a big role in the result of a match, this is why a good team cannot at the present time do without a good goalkeeper. He becomes then an important element or essential to be centered on the specific training of the goalkeeper in order to enable him to develop his technic capacities, tactical, physical and psychological. It is advisable to proportion the workload in order to answer the need simultaneously for sufficiently repeating the gestures to integrate them and for managing the energy expenditure in order to maintain the best quality of possible realization [1].

Until now, physical effort of the goalkeeper has been very little studied. It is known only that the average distance covered by the goalkeepers during the matches of the 1st English division was 5 km (± 613). The distance covered to high intensity was 56 ± 34 m, whereas sprint covered by distance was 11 ± 12 m, the mean number of actions at high speed was 10 ± 6 m and on the whole, a guard traverses 1 km with move back [2]. If the guards traverse up to 5 km, it is because they are increasingly constrained to take part in the play. Furthermore, they wish to remain moving to preserve their promptness and their concentration, in the same way, when the weather is cold, they

remain moving not to cool [3]. Its role is primarily defensive, but that position on the ground confers a role of observer to him which is useful during the revival of the balloon. Its tactical direction, its placement (advanced or moved back) in the penalty area can be offensive assets for the team [4].

2. Materials and Methods

2.1 Subjects

Our work concerned guards seniors in good health belonging to several teams of division one and two Algerian professional of football, average age of (22.8 ± 0.9 years), and the tests have been realized in the end of the first cycle of conditioning.

2.2 Tests

2.2.1 Wingate Test

The guards carried out the test of Wingate test which consists in carrying out a maximum effort of 30 s on ergometric bicycle (Monark, Model 834 E) with a force of braking of 75 g/kg^{-1} of body mass Bar-But (1978), and the vertical jump on a punt forms of force (Ergo Tester Globus, Italy).

2.2.2 The Test of the Vertical Jump (CMJ-SJ)

We use for this test a carpet (Ergo Tester Globus, Italy). The athlete carries out three vertical jumps with maximum force without advancing or moving back. This test is used to measure the capacity of the muscles

Table 1 Results of the biochemical tests of the Algerian professional goalkeepers.

	Age (years)	Weight (kg)	Size (cm)	Hct (%)	Hb (g/l)	Mg (%)
Mean \pm SD	22.8 \pm 5.5	76.06 \pm 6.3	182.3 \pm 6.1	42.3 \pm 2.1	13.4 \pm 0.7	18.0 \pm 5.2

SD: standard deviation.

Table 2 Results of the physical tests of the Algerian professional goalkeepers.

	VMA Vameval (km/h)	SJ (cm)	CMJ (cm)	Speed coordination (sec)	WX (watt)	WAN (watt)
Mean \pm SD	15.8 \pm 0.7	0.40 \pm 0.05	0.441 \pm 0.07	5.64 \pm 0.49	643.2 \pm 167	486.3 \pm 75.1

SD: standard deviation.

of the femur as well as the flexors of ankle and which are significant in work technico-tactic in football [5].

2.2.3 Test VAMEVAL

The test proceeds on track a length equal to a multiple of 20 m. The test consists of a race in which speed increases by 0.5 km/h every minute. This speed is regulated by means of sound beeps of a beeper all the 20 m [6].

2.2.4 The Biometric Test

The fatty mass makes it possible to better apprehend it on weight of a player, we used the method of the 4 cutaneous folds of Wormersley and Durin [7].

3. Results and Discussion

According to Table 1, the goalkeepers have a size, a weight less than those of the high level Danish guards 1.90 \pm 0.06 m, 87.8 \pm 8.0 kg [8], the body fatty mass is also less compared to the goalkeepers Croatians 20.2%.

The physical performance and power were shown in Table 2, the performances carried out during test CMJ is highly higher (0.441 \pm 0.07 vs 42.1 m), on the other hand, the results of the SJ are lower (0.40 \pm 0.05 vs 41.8), compared to the results reported by Gil [9].

The performances of the WAT are generally lower than those observed at the goalkeepers of the first and the second division of the championship of England: Wx: (1273 Watt vs 643.2 \pm 167), Wan: (841 Watt vs 486.3 \pm 75.1) [10].

4. Conclusion

The Algerian goalkeepers showed an obvious lack of power, which is mainly related to the non control of the maculation techniques by the preparers of Algerian goalkeepers, and the non implication of the preparer in the contents and the objectives indicated by the preparer of the goalkeepers.

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