

## Observation method and its weaknesses in selecting Algerian goalkeepers

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### Abstract:

Background. Many East European countries released the weakness of the traditional method and tried to develop methods of identification which could be underpinned by scientific theory and evidence.

Aims. The present study was conducted to determine the limits of naked-eye appreciation practice by our coaches as methods of selecting the potential goalkeeper. Methods. To archive this objective, this comparative study, tests 28 goalkeepers, at the end of the outward phase by penalty kicks Test, 'T' Drill Test, Ruler Drop Test (TR) and anthropometric parameters (BH, BMI, WC, and BW). Distributed into three groups depending on their success in the penalty test (PK%: GP1~50% - GP2~60% -GP3~70% of succeeds). Results. Backed by the applied statistical and success in the penalty kick test(km), our results approve the defect of traditional methods admits by our scientists in their subjectivity to assess the amount of body fat and its effect on physical performance. The case of our total goalkeepers whom should exercise so harder below this illness according to FIFA classification. Conclusions. To forecast the success of talented goalkeeper in adult elite competition, the anthropometrical and somatic characteristics are actually crucial to discriminate talented from non-talented soccer players. From that, we recommend our coaches to approve their observations. Setting up on predisposing tests to enhance their decisions credibility and objectivity in selecting/detecting or evaluating the progression of their players in the long term or in the short term.

**Key words:** observation method, selection, performance of Algerian goalkeepers

### Introduction

The process of player selection and team formation in multi-player sports is a complicated multi-criteria problem. Approved by our scientists in the case of national football never reached, its cruising speed, as much as the traditional method is used as selection talents in Algerian football. Support by Zerf Mohammed, the case of Body profile that cannot be stabilized by the naked eye (Hakim Hamzaoui, Zerf Mohammed, Lakhdar Messalti, Houar Abdelatif, 2016) (Hakim Hamzaoui, Zerf Mohammed, Lakhdar Messalti, Houar Abdelatif 2016). Cancel by FIFA among overweight goalkeeper (Eddison Cantor, Jeff G. Konin, 2006) called to work (Jerry Kindall, John Winkin, 2000) harder under this phenomenon (Alex Welsh 2014). Set by similar studies in the impact of anthropometric parameters on the physical performance. As well as the limitations of traditional methods, which put our coaches at risk for injuries in selecting their top players. Reported in various Eastern European countries to the weakness of this method, that which must be revised by the scientific theories and evidence. Neglect in semantics practices owing to their observations based on the naked eye and coaches experience (Elaine Wolstencroft, 2002) (Zerf Mohammed, Houar Abelatif, Mime Mokhtar, Bengoua Ali, 2016). Dismiss by (Athanasios G. Papaioannou, Dieter Hackfort, 2014) in their numerous problems, when the coach based his decisions on this method to determine the talents of the non-talents.

Since in general, the selection of soccer players and formation of a team is judgments made by the coaches. On the basis of the best available information (Madjid Tavana, Farshad Azizi, Farzad Azizi and Majid Behzadian, 2013). Evidence criticizes by our scientists the case of football national (Zerf Mohammed, Houar Abelatif, Mime Mokhtar, Bengoua Ali, 2016):

### Hypothesis

The present study was undertaken to examine the limits of observation method since it's the most practised in selecting our potential players (Hakim Hamzaoui, Zerf Mohammed, Lakhdar Messalti, Houar Abdelatif, 2016). Sustain in the present by the literature review, which acknowledged the usefulness of analysis qualitatively or quantitatively from football demands. Where quantitative values give an overall trend, though qualitative values suggest specific training for occupying positions. Indicated in similar studies as guidelines in establishing the individualized training and evaluation program in the players' career plan (Hakim Hamzaoui, Zerf Mohammed, Lakhdar Messalti, Houar Abdelatif 2016). Advice by (Ziv G, Lidor R, 509-24) that coaches should adopt a judicious approach when they selected their test protocols and devices for the assessment of GKs' physiological attributes. The case of the present study which supports; in order to ascertain the potential

goalkeepers, we recommend our coaches to approve their observations. Based on predisposing tests to enhance their decisions credibility and objectivity in selecting/detecting or evaluating the progression of their players in the long term or in the short term.

**Material and methods**

*Research protocol*

Based upon practical recommendation, which suggestions in one hand, that football coaches working with GK need to know: (A) professional adult GKs usually have a body mass under 5% (kg/m<sup>2</sup>) over then its ideal weight related to its height; (b) mixed agility, strength, power, and speed; (c) cover approximately 5.5 km during a game, mostly by walking and jogging. In another, that more body fat related to players positions different request different physical and physiological training aspects (Sporis G, Jukic, Ostojic SM, Milanovic D, 2009). While to archive this objective, our protocol based on the relations between the selected players “performance in penalty Retains vs others variables were chosen to study”. Which allows us to distribute the sample into three groups depending on their success in the penalty test (PK%: GP1≈50% - GP2≈60% -GP3≈70% of success).

a) *Period and place of the research*

All goalkeepers who participated in the present study are under 17 years with the best ranking in Oran football league for the 2015-2016. The second division holds in their posts.

b) *Subjects and groups*

The homogeneity and the normality were calculated based on age training and test penalty kicks skill, the time reaction (Ruler Drop Test) and Agility-T- test, and anthropometric parameters (BH, BW, BMI, WC) at the end of the outward phase used in the current study. See Fig 1.

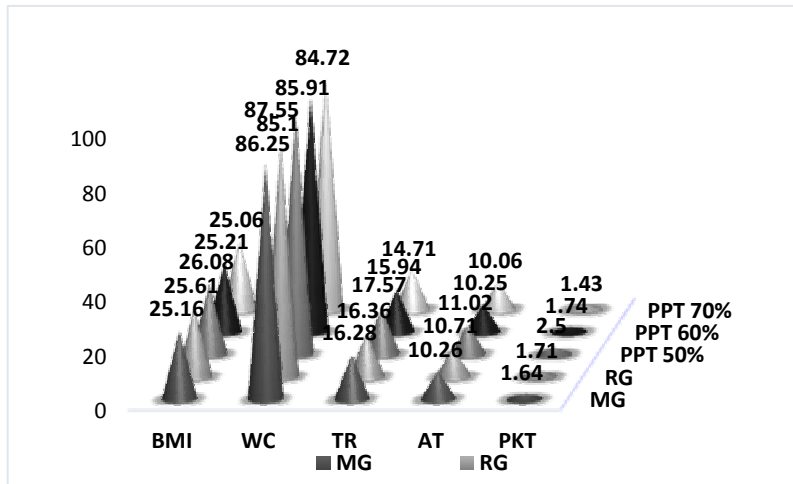


Fig 1. Characteristics of the sample appointing based on the protocol.

c) *Tests applied*

**Anthropometry, Body Composition, and body fat percent:**

Body height (BH-cm) and body mass (BW-kg) of each player were measured and the body mass index (BMI) was calculated (kg/m<sup>2</sup>), body fat percent based on waist circumference as highly correlated with the amount of intra-abdominal or visceral fat. To evaluate the results: we refer to the normative data of BMI by the World Health Organization according to Stanley P. Brown, et al (Stanley P. Brown, Wayne C. Miller, Jane M. Eason, 2006). For waistlines WC (cm), we agree with the normative data provided by the Medical Science (Zerf Mohammed, Mokkedes Moulay Idris, Hamek Bagdad, Houar Abelatif and Bengoua Ali, 2016).

**Ruler Drop Test (TR)**

The objective of this test is to monitor. The athlete's reaction time. To undertake this test, we will require Metre ruler – Assistant, to conduct the test:

The assistance between the outstretched index finger and thumb of the athlete’s dominant hand holds the ruler so that the top of the athlete's thumb is level with the zero centimetre line on the ruler. The assistant releases the ruler and the athlete catches the ruler between their index finger and thumb as quickly possible. The assistant record distance between the bottom of the ruler and the top of the athlete's thumb, where the ruler has been caught.

The test is repeated 2 more times and the average value used in the assessment.

To evaluate the results: we refer to the normative data, adapted by Davis (2000) for 16 to 19-year (Bob Davis, 2000).

**'T' Drill Test (TD):**

The subjects start from the standing point at cone A, and they are asked to run in a straight line to come to B. Then, they slide to cone C, which is the left side. After touching cone C, they slide to the right and touch

cone D. Finally, they run again to the left, touch Cone B, and run back to the start position. Every subject performed three trials with the best score recorded for analysis.

**Test penalty kicks skill (PK%):**

In the penalty kick scenario, the goalkeeper is the threatening primary source in the environment (Jay Martin 2015). While in the case of this study, we recruited 5 senior players who framed their shots well. Each goalkeeper must stop the 5 shots. All penalties go by the turn. The non-framed penalty it is not counted (Jay Hoffman, 2006). Based on their results, we calculate Penalty Retains%. As protocol tested in the present study.

d) *Statistical processing*

The results were analysed using SPSS software (version 20.0; SPSS, Inc., Chicago, IL). To assess the differences between the selected, ANOVA followed by LSD were performed using each variable. The results are described as mean and SD. The level of significance was established at  $p < 0.05$ . Shapiro-Wilk and Levene's were carried out to calculate the normality and homogeneity. Although the correlation was calculated based on the person. See Table 1& 2 and correlation paired samples Table 3. Regression analysis was used for analyses relating performance in penalties (PPT %) with the other variables listed in the present study, see Table 4.

**Results**

The present study was aimed at examining the limits of processes practised by Algerian coaches in selecting the potential goalkeeper. Built on differences record in penalty Retains % test, as a protocol to set up the advantages and disadvantages of the modalities and procedures followed by our trainers.

Through Table 1. Built on applied statistics, our results suggest that our total sample is classified overweight, giving their BMI, and over 80cm, agreeing on WC as sometimes health and risk related to physical body signs and size (Alaska Fernández 2017). Confirmed through ANOVA and LSD statistically significant in all the comparisons practised for a player with less BMI and WC as a high performing player. Maintained by LSD in the benefits of groups with more penalty kipping, see Table2. Revoked in person correlations as adverse impact between Penalty Retains % success and other variables studies, display on table 3. Evoked by researchers in the relationships weight-for-height, as an index of BMI as well as BMI for WC as indicators of the adjust body weight confirms in the present study as a need of desirable body weight aimed at optional competitive body (L. Kathleen Mahan, Sylvia Escott-Stump, Janice L. Raymond, 2012) among our sample. Relied on by the search teams, inappropriate body weight, body mass index (BMI) related waist sizes and body shape as factors evocative of excess weight (M Zerf, 2017). Whereas its measurements are restricted when we used the naked eye as approaches for identifying the potential goalkeeper. Interpret by (Edward T Howley, Dixie L Thompson, 2017) as negative influences of body fatness correlated to the both mechanically and metabolically in most physical tasks that require translocation of body weight ((William E. Garrett, Donald T. Kirkendall, 2000). Illustrated by (Walter F. Boron, Emile L. Boulpaep, 2012). In its upper effects, the movements to become fluid and more energetically efficiently, reflected by highly trained athletes. Claims in this study as defects of observation method, which bases its judgments on the behaviour of the naked eye. Registered in body fat, as a parameter that influenced physical and anthropometric parameters (M Zerf, 2017) (Mohammed Zerf, 2016) (Mohammed Zerf, 2016). Requiring from player to achieve a higher result, upper than the average, absolutely to his bodily constitution relative to his training process for long-term (Marko Gusic, Stevo Popović, Slavko Molnar, Bojan Mašanović, Mica Radakovic 2017) to perform with maximum efficiency. Estimated in this study, through the relationships shows in Table 3 and 4. Where the weight-for-height referee the impact of the optional body on the performance of our GK. Affirmed by similar studies in the signification of lower levels of fat. Inspected through the quantification and comparison of anthropometry, which should help coaches had better understand the specific requirements of post-play (Zerf Mohammed, Houar Abelatif, Mime Mokhtar and Bengoua Ali 2016). The case of this study via the GK.

Table 1. Descriptive Statistics

Variables	Penalty Retains	N	Mean	SD	Shapiro-Wilk	$p \leq 0,05$	Levene's	$p \leq 0,05$	F	$p \leq 0,05$
BW (Kg)	50%	14	68.03	5.70	0.97	0.59	0.28	0.76	0.07	0.94
	60%	6	67.35	5.25						
	70%	8	67.21	6.71						
	Total	28	67.65	5.70						
BH (cm)	50%	14	176.85	7.39	0.96	0.32	2.17	0.14	26.67	0.53
	60%	6	173.50	3.39						
	70%	8	176.87	6.01						
	Total	28	176.14	6.311						
BMI (kg/m <sup>2</sup> )	50%	14	28.28	0.632	0.98	0.89	0.59	0.56	17.67	0.00
	60%	6	27.51	0.43						
	70%	8	26.66	0.69						
	Total	28	27.65	0.92						
WC (cm)	50%	14	91.35	3.56	0.97	0.77	1.38	0.27	24.12	0.00
	60%	6	87.41	1.51						
	70%	8	81.72	3.12						
	Total	28	87.75	5.160						

TR (cm)	50%	14	15.07	1.47	0.95	0.33	1.563	0.79	13.19	0.00
	60%	6	13.54	1.12						
	70%	8	12.31	0.72						
	Total	28	13.95	1.70						
TD (secs)	50%	14	15.13	1.78	0.53	0.32	0.23	0.77	24.27	0.00
	60%	6	12.25	0.50						
	70%	8	11.26	0.49						
	Total	28	13.41	2.19						

waist circumference‡ 32.3 to 40.2(in)\* 61.8 to 68.0(cm) via Sportsmen, more are suggestive at high abdominal/central obesity- Body Mass Index (BMI) overweight≥25- Ruler Drop Test Average 15.9 - 20.4cm, 'T' Drill Test Average 10.13 - 10.37 secs, penalty kicks skill-less goal

Table 2. Describe the differences based penalty Retains percentage as a protocol in the present study.

Dependent Variable	(I) KP	(J) KP	Mean Difference (I-J)	Std. Error	Sig.
BMI	50%	60%	0.76381*	0.30064	0.018
		70%	1.61464*	0.27307	0.000
	60%	50%	-0.76381*	0.30064	0.018
		70%	.85083*	0.33274	0.017
	70%	50%	-1.61464*	0.27307	0.000
		60%	-0.85083*	0.33274	0.017
WC	50%	60%	3.94143*	1.52886	0.016
		70%	9.63643*	1.38865	0.000
	60%	50%	-3.94143*	1.52886	0.016
		70%	5.69500*	1.69213	0.002
	70%	50%	-9.63643*	1.38865	0.000
		60%	-5.69500*	1.69213	0.002
TR	50%	60%	1.52762*	0.60251	0.018
		70%	2.76554*	0.54726	0.000
	60%	50%	-1.52762*	0.60251	0.018
		70%	1.23792	0.66686	0.075
	70%	50%	-2.76554*	0.54726	0.000
		60%	-1.23792	0.66686	0.075
TD	50%	60%	2.87857*	0.65042	0.000
		70%	3.86357*	0.59078	0.000
	60%	50%	-2.87857*	0.65042	0.000
		70%	0.98500	0.71989	0.183
	70%	50%	-3.86357*	0.59078	0.000
		60%	-0.98500	0.71989	0.183

\*. The mean difference is significant at the 0.05 level.

Table 3. Present correlation between Penalty Retains percentage and others variables studies

	BMI	WC	TR	AT	KP
Penalty Retains %	-0.765**	-0.809**	-0.716**	-0.793**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 4. Multi-regression analyses relating performance in penalties (PPT %) with the other variables listed in the present study

Least squares multiple regression	Dependent Y	PPT%
Method		Stepwise
Enter variable if P<		0.05
Remove variable if P>		0.1
Sample size		28
Coefficient of determination R2		0.7460
R2-adjusted		0.7257
Multiple correlation coefficient		0.8637
Residual standard deviation		0.4587

## Regression Equation

Independent variables	Coefficient	Std. Error	rpartial	t	P
(Constant)	24.4998				
BMI	-0.3873	0.1285	-0.5163	-3.015	0.0058
WC	-0.09120	0.02293	-0.6225	-3.977	0.0005

Variables not included in the model

TR

AT

## Analysis of Variance

Source	DF	Sum of Squares	Mean Square
Regression	2	15.4538	7.7269
Residual	25	5.2605	0.2104
F-ratio		36.7217	
Significance level		P<0.0001	

**Discussions**

Tolerating to the data collected in comparison with the normative data labouring in the present study Fig 1. Agreeing to the ANOVA pursued by LSD, Person correlation, and Multi-regression analyses relating performance in penalties (PPT %) with the other variables referred to in the present study. Our results show that the body fat excess negatively affecting Penalty performance, account by the protocol applied in the present study. From that, our results claim weight for height relationships as defects of observation method base on trainer naked eye. Set up by anthropometric studies, that certain physical factor, including body fat, body mass, muscle mass, and physique significantly influences athletic performance (Cherif Moncef, MD, Mohamed Said, PhD, Najlaoui Olfa, PhD, Gomri Dagbaji, PhD 2012). Expected in the case of this study in the weight for height relationships, index of BMI as well as BMI for WC relationships as superiors anthropometric parameters indicators of the adjust body weight. Record via our sample that is allocated to the overweight category, according to WHO BMI standards and large waist as a factor influencing performance (Zerf Mohammed, Atouti Nouredine, Ben Farouk Abdullah 2017). Account by FIFA as unfavourable body weight gains via the top goalkeepers, which necessitates additional work. Deduced by the research team, in weight gain and weight stabilization correlates to adjust body weight relative to body lost and control program. Acknowledged by previous research, in the lavish body fat. As a phenomenon with high-risk factors, injury related to the increase in body mass index (BMI), conducting the athlete to a multitude of further risk factors. Requesting an examination of the association between overweight and sports damage (A Ezzat, A Schneeberg, M Koehoorn, 2014) (A Chaalali, M Rouissi, M Chtara, A Owen, NL Bragazzi, W Moalla, A Chaouachi, M Amri, K Chamari, 2016). Assumed by William J. Kraemer, et al in their consequences on physical performance (William J. Kraemer, Steven J. Fleck, Michael R. Deschenes, 2012). Affirmed Zerf Mohammed, et al (Mohammed Zerf, 2016), in the relation between body composition and advantage athletic performance to conserve a high level of fitness correlate to optimal athletic body competition (Martyna Mączka, Anna Sass, Anna Wojtyła, 2017). From the proof, that body composition analysis is part of the physical fitness assessment to esteem the gain of fat correlate to levels of lean muscle (Philipp Halfmann, 2012) as expected global target weight loss program (Sandy Fritz 2013), including the reduction of body fat (John C Griffin, 2015) to achieve desired body composition. Our recommendations are directed to our fitness coach and especially for goalkeeper coaches to control and record the changes in body fat levels, appreciated by the influence of exercise training on physiological and performance changes related to weight loss as an assessment program (William J. Kraemer, Steven J. Fleck, Michael R. Deschenes, 2012).

**Conclusions**

To select the foremost goalkeeper, we accentuate our coaches' to seek desirable physical characteristics obtained by anthropometric parameters (Robertson S, Woods C, Gatin P, 2015). A practice criticizes by the Algerian studies in the integration of our goalkeepers in all training sessions (Hadjar Kh. M., Koutchouk S. M., Mime M., Zerf M., Zereg Fateh, 2016). As a complementary program, including the constant, exercise (Lorenzo Di Iorio, Ferretto Ferretti, 2004) to maintain or to improve physical fitness (Wener W.K. Hoeger, Sharon A. Hoeger, 2015) as well as basic skills. Established by the scientific method (programming or evaluating) as a fundamental and significant practice, used in the developed and for an individual's development to achieve Olympic level performance in any sports discipline (Sanjay Kumar Prajapat, 2015). A recommended practice for the Algerian coaches to establish their judgment on predisposing tests to enhance their decisions credibility and objectivity in selecting/detecting or evaluating the progression of their players in the long term or in the short term. The case of this study, which shows the limitations of traditional methods of selecting the potential goalkeeper, owing to the anthropometrics characteristics interrelated with physiological demand assessment associated with body composition change (body fat, bone and muscle), which request the scientific basis to

quantify the load training programs, proficient to improve physical performance in accordance with anthropometric levels.

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