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Main goalkeeper versus his substitute: Which criteria limits the selection of the potential

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Abstract

Goalkeeper (GK) is an expert in soccer and goalkeeping is a completely professional job. In fact, achieving success seems impossible without a reliable GK. Face to this credence, our goals were intended to test the limits of naked-eye coach's appreciation, in selecting the potential goalkeepers via the Algerian championship. Considered by our scientists in their subjectivity to take into account the effect of anthropometric characteristics on quantification of training loads and their relationships with physical performance. Pointed by FIFA in the conviction of the overweight goalkeeper, who should work harder under this dead weight. For this proposal, 28 goalkeepers from eight Oran league teams, second division at Algerian championships. Their homogeneity was assessed giving their qualifications in their teams (14-MG v's 14-SG), as well as their performance in the penalty test. Tested by the flowing trials; Penalty Kicks (PK), drill rule drop (TR), 'T' Drill Test and anthropometric characteristics; body height (BH) & weight (BW) and waist circumference (WC), during the season 2015-2016. As a protocol to predict the differences between selected players and their weaknesses in the penalty test. Based on applied statistics; our results expose the defects of traditional method in the predict of anthropometric characteristics and their influence on training loads to maintain optimal fitness body. Record in the insignificantly of independent t-test in all comparisons practised between MG V'S SG. Advised by the relation BMI to WC size, as higher factors predicting the success of the sample in the penalty test. Supported by similar studies in the quantification of bound training loads, relative with the excess of body fat and its consequences on the physical performance, associated with anthropometric dimensions (shape or type).

Keywords: Goalkeeper, selection, soccer, Algerian.

INTRODUCTION

Describes the role of the goalkeeper (GK) in the game of soccer, the statistics revalued that 80% of team responsible ranking (Simon Smith, 2008) success (Zoran Kacic, 2015), returns to its performance (Joaquin Dosil, 2006) as a particular player (Mat Buckland, 2005), which have de privilege to use different skills separate class than field players (Rafi Srebro, Vladimir Petcov, 2002). Offer him or her the opportunity to be a strategist (Timothy Mulqueen , 2010) during a match (Michael Hurley , 2011).

Especially with the arrival of laws FIFA (John MacKay, 2015), which nominated him to participate as the eleventh player. A task that need from him an additional physical condition, depends on several factors as genetic traits, health, diet, environment, training schedule, moods and body composition control (Domingo J R-C, et al., 2014).

Exposed by (ZORAN M, et al 2011) as reserve physiological, indicators of its physical performance levels (KRUSTRUP P,et al, 2005), associated with it body fat. While it's less increase body physical fitness. Agreed in similar as an ultimate factor troubling the physiological and morphological characteristics of the athletic performance. Support by (Thomas L.et al, 2012) in the organisms' body vitality of player relative to physical load's realisation. Challenging from the coaches an accurate, potential information about the post-game specialness demands, to develop a training program based on those requests (Gray AJ, Jenkins DG, 2010).

Evidence illustrating the complications of the methods for selecting the goalkeepers (Zoran Kacic, 2007). Revealed by our scientists, that the national football never reached its cruising speed, as much as the traditional method is used in the sections of the Algerian footballers. Revoked by FIFA, via overweight goalkeepers (Eddison C,Jeff G. K, 2006) to working (Jerry Kindall, John Winkin, 2000) harder under these conditions (Alex Welsh, 2014). Identify by similar studies in the impact of anthropometric specifications on the physical performance. As well as the limitations of traditional methods, which put our coaches at risk for injuries in selecting the typical goalkeeper training loads and their relation to the level of growth of physical and morphological characteristics. Reported in various Eastern European countries to its weakness, which needs to be validated by scientific theories and evidence. View its judgement based on the naked eye and the experiences of coaches (Elaine Wolstencroft, 2002). Dismissed by (Athanasios G. et al, 2014) in several problems, when the coach centred his decisions based on this method to identify the talents of non-talents.

Backings on these guidelines, this study attempted to examine the strength and weakness of the observation method in the selection of the potential goalkeeper. Recognised by (Mohammad Bazmara, et al, 2012) that this procedure is carried out by coaches using their experiences and observations to choose their GK. While the scientific literature spots the utility of analysis quantitatively or quantified based on the qualifications of the footballer. When quantitative uses give a general trend, still qualitative values propose specific training positions. Reference in similar studies as guidelines for establishing the individualised training and assessment program in the players' profession plan (Hakim Hamzaoui, et al, 2016). Suggested by (Ziv G and Lidor R., 2011) that coaches must bring a cautious approach when they planned their tests protocols and devices for assessing physiological and physical characteristics among the recruitment of GK. From the proofs, the present study, challenge to inspect the gaps of the observation method for selecting the potential goalkeeper. Based on the light of their qualification Main goalkeeper (MG) or substitute (SG), and their ratio performance in penalty testing (PPT %), as protocol chosen for this modest study.

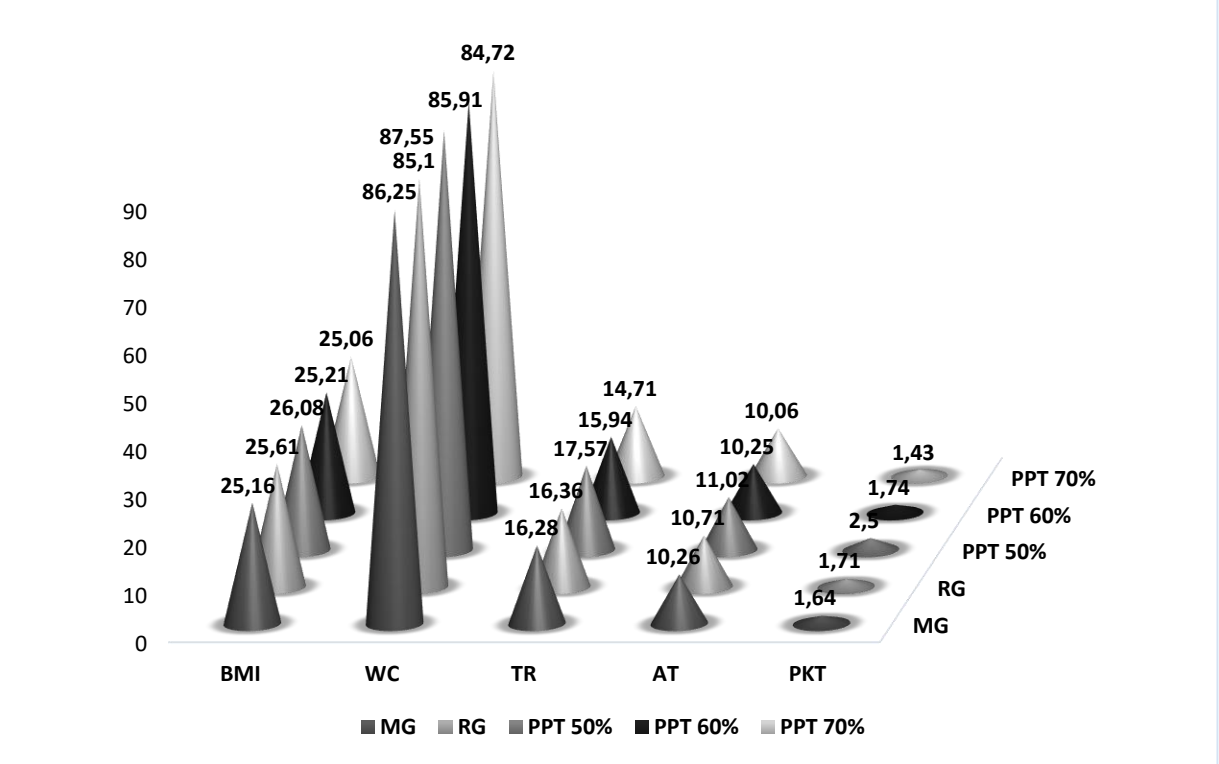
METHOD

Search approach:

The researchers centred on the descriptive approach with two groups of goalkeepers classified into the following groupings: Total GK=28, main MG=14 and substitutes RG=14. As well as their ratio in penalty testing performance (PPT %). Such as a protocol to check the impact of training program between the two groups as well as the predictions of the factors that weaken their performances in goalkeepers skills. Support for proposals that football coaches employed with GK need to know that professional adult GKs usually have a body mass under 5% (kg/m^2) its ideal weight related to its height; mixed agility, strength, power and speed; cover approximately 5.5 km during a game, mostly by walking and jogging. Account by similar studies in the extra body fat as a negative effect of the body loss management relative to the realised training programme (Sporis G, et al, 2009).

The research sample

Represent all goalkeepers under 17 years with the best ranking in Oran football league for the season 2015-2016. The second division holds in their posts, their homogeneousness was calculated based on age training and test penalty kicks skill, the time the reaction (Ruler Drop Test) and Agility-T- test, and anthropometric parameters (BH, BW, BMI, WC) at the end of the Go phase. As protocol, See



body mass index (BMI), Waist circumference (WC), Ruler Drop Test (TR), 'T' Drill Test (AT) and Test penalty kicks skill (PKT)

Figure 1. Characteristics of Main Goalkeeper (MG) versus his Substitute (MG) appointing based on the protocol.

Testing Protocol

All physical tests were conducted after warm-up, which was under the supervision of the goalkeepers coach.

Anthropometry, Body Composition, and waistline as indicator of obesity

Body height (cm) and body mass (kg) of each player were measured and the body mass index (BMI) was calculated (kg/m^2). Waist circumference was measured as a surrogate of body fat distribution as the complement of BMI measurements. To evaluate the results: we refer to the normative data of BMI or WC provided by the World Health Organization according to (Stanley P. B, Wayne C. M, Jane M. E, 2006), agreed by the Medical Science, according to (Neeraj Goswamy, MD, 2014).

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 for 16 to 19-year (Bob Davis, 2000).

'T' Drill Test (AT)

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 (Robert G. L. et al, 2014).

Test penalty kicks skill (PKT)

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. All kicks were in the legal position defined by FIFA's laws. Each goalkeeper must stop the 5 shots. All penalties go by the turn. The non-framed penalty it is not counted.

Statistical Analyses

All results were analysed using SPSS software (version 20.0; SPSS, Inc., Chicago, IL) in p value was set at $p<0.05$. As our protocol is carried out to assess the differences between MG and RG. We based on the independent sample t-test to get access to the difference between the two groups. While the multi-regression analyses were used to predict the factors, which explain the weakness of our GK in penalty test, giving to variables choose to study. Shapiro-Wilk and Levine were accompanied to analyse the normality and homogeneity of our total sample.

RESULTS

On the light of the qualification of our GK (MG Vs SG) and their performance ratios in penalty testing (PPT %), as protocol chosen in this study sees Figure 1. Composed to check the advantages and disadvantages of naked-eye appreciation in selecting the potential goalkeepers as a procedure practised by our coaches. Through Table 1. Built on descriptive statistics. Our results categorise our total sample in overweight category giving their BMI at high risk of abdominal obesity, agreeing with their WC more than 80cm. As well as the differences between the MG and SG are not statistically significances. Justified by the independent t-test in all comparisons practised. Recorded by researchers in weight for height relationship to predict the ideal BMI, and WC to BMI to predict the adjusted physical fitness body. Expected in by Multi-Regression analyses see Table 2. Through the BMI and WC as the only predictors of success in penalty testing at $P \leq 0.05$. Reinforced by significant of F and T at $P \leq 0.001$. A result, which guides us to confirm the need of desirable body weight building, aimed at the ideal composition body (Kathleen M L, Sylvia E-S, and Janice L. R, 2012) relative to the levels performance among our sample. Admitted by the search teams, as an inappropriate body mass index (BMI) expressing the excess of body gain (M Zerf, 2017). Whereas its measurements are limited when we used the naked eye as a means to select the potential goalkeeper. Interpret by (Edward T H & Dixie L T, 2017) as a negative effect of fat relates to the both mechanical and metabolically in most physical tasks depending on the translocation of body weight (William E. Garrett, Donald T. Kirkendall , 2000). Illustrated by (Walter F. B & Emile L. B, 2012) in its upper, affects the movements, to become fluid and more energetically efficiently reflected by highly trained athletes. Upholds in this study as defects of observation method, which bases its judgments on the behaviour of the naked eye. Recorded in body fat, as a factor, influencing the physical performed relative to anthropometric characteristics (Mohammed Zerf, 2016). Missing from players to achieve higher results, upper than the average, absolute to their bodily constitution relative to their training process for long-term (Marko G, Stevo P, Slavko M, Bojan M, and Mica R, 2017) with maximum efficiency. Estimated in this study, through the weight-for-height reference of the optional body connected to the select athletes at lower levels of fat. Relying on the quantification and comparison of anthropometric indexes, which should help coaches have a better understanding of the necessities of post-play specification (Zerf M, Houar A, Mime M and Bengoua A, 2016).

Table 1. Descriptive Statistics

		N	Mean±SD	Shapiro-Wilk	p≤0,05	Levene's	p≤0,05	T	p≤0,05
Weight (kg)	MG	14	67.41±6.05	0.949	0.538	0.353	0.558	-0.39	0.699
	SG	14	68.33±6,36	0.894	0.094				
	Total	28	67.87±6.11	0.944	0.472				
Height (cm)	MG	14	177.07±4,22	0.935	0.358	1.073	0.310	0.48	0.630
	SG	14	176.07±6.40	0.912	0.168				
	Total	28	176.57±5,34	0.908	0.148				
WC (cm)	MG	14	86.25±1,82	0.943	0.458	0.924	0.335	0.27	0.876
	SG	14	85.10±2,16	0.945	0.482				
	Total	28	15.16±1,96	0.889	0.078				
BMI (kg/m2)	MG	14	25.16±1.71	0.889	0.079	2.27	0.144	0.94	0.36
	SG	14	25.61±1.39	0.887	0.074				
	Total	28	25.89±1,56	0.952	0.587				
PK (n°)	MG	14	1.64±0.84	0.941	0.427	0.003	0.955	-0.44	0.67
	SG	14	1.78±0.89	0.944	0.467				
	Total	28	1.71±0.85	0.949	0.538				
TR (cm)	MG	14	16.28±2.84	0.894	0.094	0.52	0.477	-1.03	0.31
	SG	14	16.36±2.67	0.944	0.472				
	Total	28	16.31±2.76	0,935	0,358				
AT (secs)	MG	14	10.26±0.66	0.912	0.168	0.36	0.553	-1.87	0.07
	SG	14	10.71±0.59	0.908	0.148				
	Total	28	10.48±0.65	0.943	0.458				

waist circumference (WC)'17years': 73.66 to 78.74 (cm) via sportsmen, more are suggestive at high-risk body fat, Body Mass Index (BMI) overweight≥25, Ruler Drop Test Average (TR) 15.9 - 20.4cm, 'T' Drill Test Average (AT) 10.13 - 10.37 secs, penalty kicks (PK)skill Less goal, to calculate the success rate (PPT%).

Table 2. 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

DISCUSSION

Founded on the last few years, there is no other position on the soccer field that has seen so many deep-rooted changes as seen in goalkeeping. Our data collected or control data, indicated in insignificant of the independent t-test significant thought all comparisons practised between our two groups. Similarly, to BMI and WC as the simply factors capable of recognising the changes in success in the penalty performance.

Our results claim the defects of the observation method at the base of the naked eye. Founded on the affirmation accommodated by anthropometric studies, that certain physical factor, including body fat, body mass, muscle mass and body influence a lot on athletic performance (Cherif M, Mohamed S, Najlaoui O, & Gomri D, 2012). Documented in the case of this study in the levels of BMI related to WC. Where our selected goalkeepers (MG or SG) are classified as overweight at high-risk abdominal obesity, according to WHO standards. Inferred in previous as a factor influencing performance (Zerf M, Atouti N, & Ben F A, 2017). Account by FIFA as dead body weight gain, which needs additional work via overweight goalkeepers. Understood by the research team, in weight gain and weight stabilisation corresponds to adjust body weight associated with body lost and control program. Esteemed by previous researchers in the excessive body fat. As a phenomenon, at high-risk factors, injury related to the increase in body mass index (BMI). Leading the athlete to many risk factors that requested examinations of the association between excessive weight and sports damage (A Ezzat, A Schneeberg, M Koehoorn, 2014). Claims by (William J. K, Steven J. F, Michael R. D, 2012) in its consequences on physical performance. Indeed by (Stanley P. B, Wayne C. M, Jane M. E, 2006) in the relation between body composition and advantage athletic performance to keep up a high level of fitness associated with the ideal athletic body competition.
From the principle, that body composition analysis is part of the physical fitness assessment in estimating the impact of the body gain corresponds to level fat and lean muscle (Philipp Halfmann, 2012). As an expected goal target of weight loss program (Sandy Fritz, 2013), including the decrease of body fat (John C Griffin, 2015) to achieve desired body composition relative to best performance.

Our recommendations are addressed to our coaches, especially the goalkeeper trainers to check and record the changes in body composition compared to fat levels since its lower improve performance (William J. K, Steven J. F, Michael R. D, 2012). The case of our MG or SG categorised in overweight. Leading the researchers to approve that sports involvement cannot guarantee its influence on physiological and morphological body composition, requesting from coach/player to prescribe the exercise for weight loss (Pantelis T N, 2012). Exposed by Carlos Lago-Peñas et al, that training program mid football players need to be modified in consideration of its consequences on skills and athletics events (Carlos L-P, Ezequiel R, Luis C, and Maite G-L, 2014). Challenged by the agility, balance, coordination, power, reaction time and speed, as most physical and motor qualities missed among all footballers (Eleanor M & Linda D, 2015). Conjured in this study via the excess of body fat impairs the ability to execute agility movements at a high level (Brent A A, Katie S and Patricia A D, 2017). Agreed by (Roberta E. Rikli, C. Jessie Jones, 2013) in the excessive body fat, which powerless the human to

move with grace. Designate by (Jay D, Mark R, 2012) in agility and speed decreasing middle players with more percentage fat.

Since the main goal of any training process is to stimulate physiological, biomechanical and psychological demands (Bill Foran, 2000). We highlight our overweight goalkeepers to works harder to develop their agility, speed, and flexibility, as well as willingness and motivation as a psychological procedure (Don Z, Peter E, 2013).

Further, to select the foremost goalkeeper, we accentuate our coaches' to inspect the desirable physical qualities associated with ideal anthropometric characteristics (Alan Hargreaves, 1990) based on control tests (lab or field) to ensure the benefits of the required training program. A practice criticises by the Algerian studies, through goalkeepers training sessions (Hadjar Kh. M., et al, 2016). Record in them recommendations to integrate the goalkeepers in all training sessions. In order to maintain or improve their physical fitness (Lorenzo D I, Ferretto F, 2004) and basic skills (Horst Wein, 1973). Founded on the scientific method, as a fundamental and significant practice must use in the developed countries (Sanjay Kumar Prajapat, 2015). The opposite of Algerian practices indicate by our scientists, that national football never reached its cruising speed, as much as the traditional method is used to select our soccer. Admit by similar in their several problems when coach use the naked eye as a method (Zerf Mohammed et al., 2016). Confident by Algerians studies in its weakness to rate or to reckoning the amount of body fat and their effects on athletics fitness. Describe by (Zahner, L. e, 2012) in the selection based on the "gaze of coach" which is subjective and based on instinct.

On its purpose, we suggested that the selection of players must focus on the laboratory or field tests to confirm the progress and gaps of selected players. The case of this study, which claimed the limitations of traditional methods in selecting the potential goalkeepers. Owing to the physiological demand assessment associated with body composition change (body fat, bone and muscle), requesting the employ of scientific basis to quantify loads of training programs to improve physical performance in accordance with anthropometric size. Advanced in the current study based on FIFA statistical via the overweight goalkeeper (Eddison C,Jeff G. K, 2006). Demanding it lasts to work harder under this body weight disorder to fulfil the specifics physiologic, morphologic and physical requests (Gerd T, Klaus R, 2000). Although, as a recommendation, we ask our trainers to apply the scientific method to test the development of teams/players with different aspects associated with their needs during the match connected to their levels of fitness coordinated to them body components (Donald T Kirkendall, 2007).

CONCLUSION

Since the overweight in our sample warrants further investigation to control the consequences of overweighting via goalkeepers. Needs from our coaches to develop an intervention that targets weight management. As a negative point in our coaches' selection practices. It is extremely important for our coaches to know; selecting a potential goalkeeper involves the application of multidisciplinary scientific and highly expert approach with available scientific findings and inferences, skilful knowledge, intuition and experience to decide about player choice and training (Slavko T, Vladan P, Viktorija T, and Damir V, 2008). Evidence guides us to criticise the naked eye as a method, which built their judgements on coaching experience. Record in the present study in its failure to predict the effects of body composition (Gerd T, Klaus R, 2000) or body fat on the levels goalkeepers performance, associated with specified post-game physical demands (Claire Mitchell-Taverner, 2005). Expressed by (Reilly T, Williams AM, Nevill A, Franks A, 2000), to predict the success of talent in adult elite competition, the anthropometric and physical characteristics are actually crucial to discriminate talented from non-talented soccer players

(Robertson S, Woods C, Gastin P, 2015). Although to select the potential goalkeeper, we recommended our coaches to approve their observations. Found on predisposing tests to enhance their decisions credibility and objectivity in selecting/detecting or evaluating the progress of their players in the long-term or short (Buchheit M, et al, 2012).

Conflict of interest

None.

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Conflict of interests: None

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