29 - A PROFILE ANALYSIS OF THE ASPIRANTS REFEREES FFMS AND CBF'S REFEREES FROM MATO GROSSO DO SUL SOCCER FEDERATION

GILDINEY PENAVES DE ALENCAR;
WANDERSON FONSECA BOGARIM;
MARCELO FERREIRA MIRANDA
Universidade Católica Dom Bosco, Campo Grande, MS
marcelo@academiam3.com.br

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INTRODUCTION

The refereeing in the professional soccer has been shown as a decisive factor for a good show and it's pointed by the athletes and the leaders as one of the most polemic and important aspect of soccer nowadays. In this sense, there is an increasing concern in the state federations of qualifying your referees for the local championships, to find a place in CBF's team (Brazilian Soccer Confederation) and FIFA's (Fédération Internacionale de Football Association).

Through observations made, we realized that many referees that play for the FFMS (Brazilian Soccer Federation of Mato Grosso Do Sul) present difficulties connected to the physical conditioning and that these difficulties have influenced their performance inside the field.

We know that the level of physical fitness of a person can be changed and also influenced by the physical activity practice, Gallahue and Ozmun (2005) mention that the physical ability can be influenced by the regular physical activity practice. Therefore, the goal of the research was to analyze the profile of the aspirant referees FFMS and referees CBF of the Mato Grosso do Sul Soccer Federation, verifying the physical ability, fat percentage and physical training in both groups.

THEORETICAL FRAMEWORK

Currently, soccer is one of the most practiced sports in the world, being considered the most popular sport in Brazil. No one knows for sure the origin of soccer, however historians mention games with balls made of bamboo in which people used their feet to kick the ball since 5,000 B.C, in China and since 4,500 B.C, in Japan (SOUZA JÚNIOR & MOTA, 2009). At first, it was a game that did not care about rules, but only in the awakening of the practitioners' pleasure.

According to Souza Júnior and Mota (2009) and Duarte (2005), in Greece, 800 B.C., one played the Epyskiros. In ancient Rome, it was disputed a game with the aim of scoring points in the opposing goal, called Harpastum. In Italy, the derivation of Harpastum took place under the name of Gioco Del Calcio, which in France was named Soule or Choule, with the purpose of taking the ball to the end of the opponent's field.

Then, the game was incorporated in England, however, it was a very violent game, being forbidden in 1314. It started being practiced only in the seventeenth century, becoming the birthplace of Modern Soccer, making it more systematic and rule creation (SOUZA JÚNIOR & MOTA, 2009).

The introduction of rules made the game became less brutal, violent, dangerous and, this way, it gained more fans, assuming characteristics of the game that is known today. In 1882, is created by England, Scotland, Ireland and Wales the International Board to define the rules of soccer, role that it assumes until today as an adviser of FIFA. Then, the rules assume a final form, being little changed or modified in the last 100 years (BRAZILIAN SOCCER CONFEDERATION, 2014).

In Brazil, soccer gained prominence and importance by Charles Miller who, in 1895 brought from England two balls made of leather, uniforms and rules to organize the first games between English people and Brazilian people (FRISSELLI & MANTOVANI, 1999).

It is noticeable that, to practice this sport, a good physical fitness is essential, mainly for the referee. Physical fitness can be related to health and performance, when it is related to performance, it means that it is connected with the acquisition and performance of specific skills, such as those required in the sport, having as main components coordination, balance, speed, agility and muscle power or explosive strength. On the other hand, the components related to health are muscle strength or muscle endurance, aerobic endurance, flexibility and body composition (GALLAHUE & OZMUN, 2005).

The soccer referee requires physical fitness to be able to always be close enough to a move, that's why it influences his performance, since the mistakes made by a referee are directly connected with the incorrect positioning in the field and early fatigue, a result of lack or deficiency of physical fitness.

A very important component analyzed in this study was the body composition which for Barrow and McGee apud Tritschler (2003, p.230) “body composition includes relative contributions of fat and lean body tissues to the total of the body weight”. According to Heyward (2004), there are several standardized types of tests to evaluate the body composition, either laboratory or field tests. In this study, the field method was used by body composition evaluation through skinfold thickness which, besides being a practical way to estimate body composition, Guedes and Guedes (1998) affirm that it is possible to obtain information related to the estimates of the amount of body fat according to the equation presented by Siri (1961).

On January first, 2007, FIFA's circular of January tenth, 2006 entered into force, which regulates the new physical tests for referee, in which evaluations are composed of two tests: six shots of forty meters, where its purpose is to evaluate the average speed during rapid e repeated matches in which the referee must run in the maximum time of 6, 4 seconds, with a 90-second recovery between the shots; and twenty shots of one hundred and fifty meters, where the purpose is to measure the cardiorespiratory capacity during rapid and repeated matches. Thus, there was the creation of productivity patterns regarding to levels, function and gender.

To show a good physical fitness, having a good cardiorespiratory capacity is essential. Guedes and Guedes (1998) and Fernandes Filho (2003) mention that the cardiorespiratory capacity is the ability to do physical activities with a dynamic character that involves a large muscle mass with moderate intensity, maintaining high levels of their metabolic reserve for a long time.

METHODOLOGY

This research is characterized as descriptive with a cross section, where the subjects were six aspirants referees FFMS that want a vacancy in Mato Grosso do Sul Soccer Federation in 2014 second pre-season, with an age average of 25,8 years old, and 5 CBF's referees, with an age average of 30,6 years old, that act for FFMS and represent the state in the national chart, all of them from the male sex.

The referees were separated in two groups according to the function inside the federation – Aspirants Referees FFMS and CBF Referees – and, in both groups a questionnaire was made to analyze the quantity of physical training made in the week and the factors that were necessary to take a vacancy in the national chart of refereeing. In addition to the questionnaire, the saved data from the last physical test from FFMS, made in each scope and made an evaluation of the body composition through dermal tuck collection was used.

The questionnaire was made by 13 questions, where the participants were asked the age, their profession outside the field, their schooling, refereeing time, quantity of physical training made weekly, if it's made a prescribed training and/or supervised for a professional in Physical Education, nutritional attendance and the use of drugs.

In the meters running test, the groups made six shots of 40 meters in the time of 6,4 seconds, with a recovery of 90 seconds between the shots. In the test of the 150 meters intermittent running, 20 shots of 150 meters, made in 35 seconds, with breaks of 50 meters walking, made in 45 seconds, for the first group. For the second group, 20 shots of 150 meters, made in 30 seconds, with breaks of 50 meters walking, made in 40 seconds.

For the body composition analysis, three cutaneous cut have been measured (pectoral, abdominal and thigh) and determined the body density according to the equation proposed by Jackson & Pollock (1978), that uses the sum of three cutaneous cut and the fat percentage using Siri's equation (1961).

The statistical tests were made through the Graphpad Prism 5.0 and the results expressed by the difference between the averages, considering the margin of error and standard deviation. The differences are considered statistically significant when the value of p is lower or equal to 0,05 ($p \leq 0,05$).

RESULTS AND DISCUSSION

The Aspirants Referees FFMS between 22 and 29 years old, with an age average of 25,8 years old. In the CBF's chart, the ages of 23 and 35 years old has an age average of 30,6 years old. Related to the refereeing time, in the first group there is a range between 9 months and 9 years, with an average of 3 years. In the second group, there was a range between 4 and 14 years, creating an average of 8,8 years, according to the data in the chart below.

Chart 3: Number found related to the age and refereeing time in Aspirants FFMS and CBF's referees from Mato Grosso do Sul Soccer Federation

GROUP	RANGE		
	Values	Age	Refereeing time
ASPIRANTS REFEREES FFMS	Minimum	22 years old	9 months
	Maximum	29 years old	9 years
	Average	25,8 years old	3 years
CBF'S REFEREES	Minimum	23 years old	4 years
	Maximum	36 years old	14 years
	Average	30,6 years old	8,8 years

Source: Research's data.

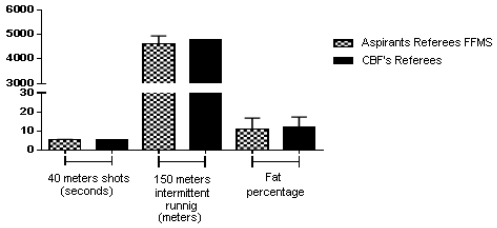
We realized that in the CBF's group 60% of the evaluated individuals with an age of 30 years old, however, in the aspirants FFMS group this age average is not found. In the refereeing time, the CBF's referees average is nearly twice related to the aspirants FFMS. With all this analysis, we verified that the CBF's referees group is considerate more experienced in age and time refereeing than the aspirants FFMS group.

Through the questionaries' answers, we verified that every referee has an occupation outside the field and that all of them are attending college or are already graduated from college. It's important to point out that to conquer a vacancy in the national refereeing chart, the aspirant must have attended to college or graduated from it (NATIONAL BRAZILIAN CONFEDERATION, 2014).

Even when CBF doesn't require a graduation in physical education, we verified that it's an occupation that has been growing in the refereeing field. In the research, in both groups, this professional is present and it's clear that from the referees that aim to get into the state chart, two of them are graduated and other two are attending to physical education school.

Every referee made the physical training, but two aspirants' referees FFMS made it without orientation, while the rest of them had an orientation and were being supervised or they are professional that prescribe their own training.

In the analysis, when compared the physical ability and the fat percentage data of the aspirants referees FFMS to the CBF's referees, there wasn't any significant difference in the statistics (test t parametric – not paired). To consider a statistically significant value, the value of “p” must be equal or lower than 0,05 ($p \leq 0,05$) where the fat percentage (p=0,73), the 40 meters shots (p=0,86) and the 150 meters intermittent running (p=0,22) presented number over the references.

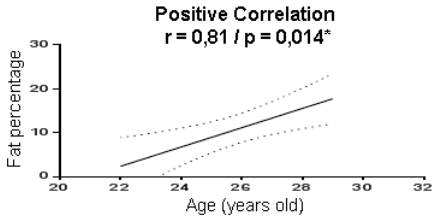


Graphic 1 – Comparison of the fat percentage and the physical ability between the Aspirants' Referees FFMS and the CBF's. Source: Research's Data.

In the six 40 meters shots, where the goal, according to FIFA, must be to finish this distance in the shorter or equal time to 6,4 seconds to the national referees, the aspirants FFMS time average was of 5,34 seconds, while with the CBF's referees group this time was of 5,31 seconds. In the 150 meters intermittent running, despite the differences between the ways of running it, the distance average made by the CBF's referees (4800 meters) was better than the Aspirants referees FFMS (4600 meters). However, this difference didn't mean a lot, because the value of “p” was higher than 0, 05 (p=0,22).

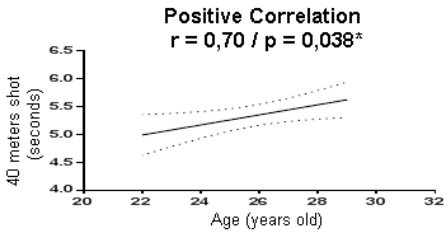
In the fat percentage averages, there wasn't any statistically significant differences (p=0,73), but the CBF's referees group (average=12,02%) presented this average higher when related to the aspirants FFMS (average=10,8).

In the analysis of correlation evaluated by the Pearson's correlation test, it's possible to notice that only when related to the aspirants referees FFMS with an increasing age the fat percentage has also increased (graphic 2) and the time they take to perform the 40 meters shot (graphic 3). Yet, as the fat percentage increases, the 150 meters running capacity decreased (graphic 4).



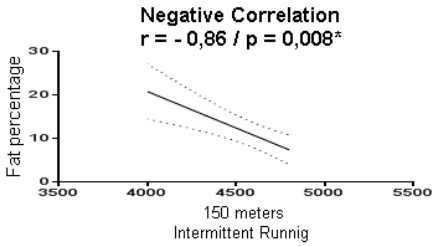
Graphic 2 – Relation between the age and the fat percentage of the aspirants referees FFMS. Source: Research's Data.

According to the graphic, as older the referee is, there is a fat percentage increase. The younger evaluated (22 years old) presented the fat percentage equal to 5,2% and the older (29 years old) 29% body fat.



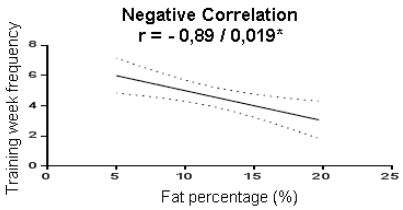
Graphic 3 – Relation between age and the velocity of the aspirants referees FFMS. Source: Research's data.

In the graphic 3 the individual gets slower as he gets older, the time average reached by the aspirants FFMS in the 40 meters running test was of 5,34 seconds with a minimum time of 4,98 seconds and a maximum time of 5,53 seconds.



Graphic 4 – Relation between the fat percentage and the cardiorespiratory capacity of the aspirants referees FFMS. Source: Research's Data.

The 150 meters intermittent running test reflected results in Cooper's reference chart (1997) apud Heyward (2004), in which, the cardiorespiratory capacity tends to decrease as the individual gets older. The younger individual (22 years old) ran 4800 meters, while the older one (29 years old) ran 4400 meters.



Graphic 5 – Relation training week frequency and fat percentage from CBF's referees. Source: Research's data

Through the graphic shown (graphic 5), it's possible to verify in the CBF's referees that, the body fat percentage decreases as the training week frequency increases.

The individual that trains three times a week has a fat percentage of 19,8% while the one that trains six times a week has a fat percentage of 5%.

FINAL COMMENTS

All the data showed in the research take us to an agreement that for a good physical ability and a good performance in the field, training and the frequency are important. It must be emphasized the tendency of the most of the referees in searching professional orientation in their physical preparation, and we verified that the results tend to improve. We identify that every referee has a physical training, but two aspirants have this training without an orientation of a Physical Education professional.

We verified that among the referees, as well as the rest of the population, present a normal tendency that while the fat percentage increases, the physical capacity decreases, therefore, if there is an expectation of progression in the career, a regular and oriented physical preparation is necessary, mainly if the referee intends to extend his performance time, because it was also clear that, as you get older, your physical capacity decreases, and we can't allow that this happens to the referee that is even more expert.

Finally, it's important to point out that, to progress inside the referee's chart is necessary a good job in the field, to know

the rules and development of the cognitive part, and the emotional and psychological control. However, these points are directly influenced by the physical ability that follows patterns required by CBF. To obtain success it's fundamental a convenient physical preparation with a physical education professional.

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A PROFILE ANALYSIS OF THE ASPIRANTS REFEREES FFMS AND CBF'S REFEREES FROM MATO GROSSO DO SUL SOCCER FEDERATION

ABSTRACT

The main goal of this research was to analyze the soccer aspirant's referee's profile from Mato Grosso do Sul Soccer Federation (FFMS). The results obtained from the physical tests made by the CBF's referees belonging to FFMS and by the aspirant's referee were used. (150 meters intermittent running, 40 meters running), fat percentage (equation proposed by Jackson and Pollock), plus the results from a questionnaire for the analysis of the referees profile. This study is descriptive with a cross section, where the subjects were six aspirants referees FFMS that want a vacancy in FFMS, with an age average of 25,8 years old, and 5 referees belonged to CBF, with an age average of 30,6 years old, that act for FFMS and represent the state in the national chart, all of them from the male sex. According to the analysis, it's possible to observe that there wasn't any significant difference between the two groups evaluated when compared the fat percentage, the 40 meters shot and the 150 meters intermittent running. Yet, with the analysis of correlation, it was possible to notice that only with the Aspirants Referees FFMS, the fat percentage increased as the evaluated person was older and the time they take to complete the 40 meters running, as the fat percentage increases the capacity of running the 150 meters running decreases, while there was nothing related to their ages with the CBF's referees. Finally, when it comes about the weekly training frequency, the body fat percentage decreases as the training frequency increases. Besides, the emotional control and psychological with knowing the rules and the development of the cognitive part are important factors for those who choose refereeing as a profession.

KEYWORDS: Physical ability – Referee – Soccer.

ANALYSE DE PROFIL DES ARBITRES ASPIRANTS FFMS ET ARBITRES CBF DE LA FÉDÉRATION DE FOOTBALL DU MATO GROSSO DO SUL

RÉSUMÉ

L'objectif de cette recherche était d'analyser le profil d'arbitres de football Aspirants FFMS et Arbitres CBF de la Fédération de Football du Mato Grosso do Sul. Les résultats des tests physiques effectués par les arbitres CBF ont été utilisés, appartenant à FFMS par les arbitres et les Aspirants FFMS (course intermittent de 150 mètres, la course de 40 mètres), pourcentage de graisse (équation proposée par Jackson et Pollock) en plus de l'application d'un questionnaire afin d'analyser le profil des arbitres. Cette étude est une nature transversale descriptive, où les sujets étaient 6 arbitres Aspirants FFMS qui desiré une vacance dans la FFMS, avec une moyenne d'âge de 25,8 annés, et 5 arbitres appartenant à CBF, avec un âge moyen de 30,6 annés, cê qui agit par FFMS et représenter l'Etat dans la cadre nationale, tous de sexe masculin. D'après l'analyse, on voit qu'il n'y a pas eu de différence statistiquement significative entre les deux groupes évalué lorsque l'on compare le pourcentage de grasse, le tir de 40 mètres et le course intermittent de 150 mètres. Pourtant, avec l'analyse de corrélation, il a été observé que seulement en ce qui concerne les arbitres Aspirants FFMS, en ce que il y avait augmenter de l'âge, augmenter aussi le pourcentage de grasse et le temps qu'il faut pour exécuter le tir de 40 mètres et que, comme le pourcentage de matière grasse augmente, diminue la capacité de course de 150 mètres, alors que les arbitres de la CBF n'a pas observé de relation entre l'âge et ces paramètres. Enfin, comme la fréquence hebdomadaire de la formation augmente, on observe que diminue le pourcentage de graisse corporelle. En outre, le contrôle émotionnel et psychologique ainsi que la connaissance des règles et le développement cognitif de sont facteurs importants pour ceux qui choisissent l'arbitrage comme une profession.

MOTS-CLÉS: Conditionnement Physique – Arbitre – Football.

ANÁLISIS DEL PERFIL DE LOS ÁRBITROS ASPIRANTES FFMS Y ÁRBITROS CBF DE LA FEDERACIÓN DE FÚTBOL DE MATO GROSSO DO SUL

RESUMEN

El objetivo de este estudio fue analizar el perfil de los árbitros aspirantes de fútbol FFMS y árbitros CBF de la Federación de Fútbol de Mato Grosso do Sul. Se utilizaron los resultados de las pruebas físicas realizadas por los árbitros CBF

pertenecientes a la FFMS del y los árbitros aspirantes FFMS (carrera intermitente de 150 metros, carrera de 40 metros), el porcentaje de grasa (ecuación propuesta por Jackson y Pollock), además de la aplicación de un cuestionario para analizar el perfil de los árbitros. Este estudio es de carácter descriptivo de corte transversal, donde los sujetos fueron 6 árbitros aspirantes FFMS que deseaban alcanzar un lugar en FFMS, con um promedio de edad de 25,8 años y 5 árbitros pertenecientes a la CBF, con um promedio de edad de 30,6 años que trabajan para FFMS y representan el estado en el panorama nacional, todos hombres. Según el análisis, se observa que no había diferencia estadísticamente significativa entre los dos grupos al comparar el porcentaje de grasa, el disparo de 40 metros y la carrera intermitente de 150 metros. Aún así, con el análisis de correlación, se observó que sólo en relación con los árbitros aspirantes FFMS, al igual que el aumento de la edad también aumenta el porcentaje de grasa y el tiempo que se tarda en ejecutar el tiro de 40 metros y que como el porcentaje de grasa aumenta, disminuye la capacidad de carrera de 150 metros, mientras que de los árbitros CBF no se observó ninguna relación entre la edad y estos parámetros. Por último, como la frecuencia semanal del entrenamiento, se observa que disminuye el porcentaje de grasa corporal a medida que este aumenta. Además, el control emocional y psicológico, junto con el conocimiento de las normas y el desarrollo de la parte cognitiva son factores importantes para los que optan por el arbitraje como profesión.

PALABRAS CLAVE: Acondicionamiento físico – Árbitro – Fútbol.

ANÁLISE DO PERFIL DOS ÁRBITROS ASPIRANTES FFMS E ÁRBITROS CBF DA FEDERAÇÃO DE FUTEBOL DE MATO GROSSO DO SUL

RESUMO

O objetivo dessa pesquisa foi analisar o perfil dos árbitros de futebol Aspirantes FFMS e Árbitros CBF da Federação de Futebol de Mato Grosso do Sul. Foram utilizados os resultados dos testes físicos realizados pelos árbitros CBF pertencentes à FFMS e pelos árbitros Aspirantes FFMS (corrida intermitente de 150 metros, corrida de 40 metros), percentual de gordura (equação proposta por Jackson e Pollock), além da aplicação de um questionário para análise do perfil dos árbitros. Esse estudo é de cunho descritivo com corte transversal, onde os sujeitos foram 6 árbitros Aspirantes FFMS que almejaram uma vaga na FFMS, com média de idade de 25,8 anos, e 5 árbitros pertencentes à CBF, com média de idade de 30,6 anos, que atuam pela FFMS e representam o Estado no quadro nacional, todos do sexo masculino. De acordo com as análises, pode-se observar que não houve uma diferença estatisticamente significativa entre os dois grupos avaliados quando comparamos o percentual de gordura, o tiro de 40 metros e a corrida intermitente de 150 metros. Ainda, com as análises de correlação, foi possível observar que somente em relação aos árbitros Aspirantes FFMS, à medida que houve aumento da idade, aumentou também a porcentagem de gordura e o tempo que eles levam para executar o tiro de 40 metros e que, à medida que a porcentagem de gordura aumenta, diminui a capacidade da corrida de 150 metros, enquanto que nos árbitros da CBF não observamos nenhuma relação da idade com estes parâmetros. Por fim, quanto à frequência semanal de treino, observa-se que diminui a porcentagem de gordura corporal à medida que esta aumenta. Além disso, o controle emocional e psicológico juntamente com o conhecimento das regras e desenvolvimento da parte cognitiva são fatores importantes para quem escolhe a arbitragem como profissão.

PALAVRAS-CHAVE: Aptidão física – Árbitro – Futebol.