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DETERMINING SOME PHYSICAL PARAMETERS OF SOCCER AND IN DOOR SOCCER PLAYERS

Pepe Osman[1], Günay Erkan[1], Çoksevim Bekir[1], Sucan Serdar[1] Polat Metin[1]
[1]Physical Education And Sport College Of Erciyes University, **TURKEY**
Email: ossy_pasha@hotmail.com / 07.02.2010 / 14.02.2010

Abstract

The purpose. At this study, it was aimed to determine some physical parameters of in door soccer and soccer players.

Methods. At this study, 32 indoor soccer players which age avarage was 22,53±0,98 (year) and 37 soccer player which age avarage was 21,16±1,95 (year) were participated volunteerly.

Age, body lenght, body weight, flexibility, vertical jump, 30 seconds shuttle, 10 metre sprint, body mass index and body fat percentage parameters of volunteers were measured.

Data were recorded on computer by using Package programe which was called SPSS. For statistical analysis between groups, independent t test was performed.

Results. According to comparement between groups, it was not found meaningful difference at the lenght, body weight, flexibility and body mass index parameters ($p>0.05$). While meaningful difference was found about body fat percentage parameter at the level of $p<0.05$, meaningful differences were found about age, vertical jump, 30 second shuttle and 30 meter sprint parameters at the level of $p<0.01$

Conclusion. Indoor soccer players were more dominant than soccer players about short timed and high intensitive excercises. We thought that this situation could be based on difference of game field sizes.

Key words: Soccer, Indoor soccer, Physical Parameters

Introduction

One of the most important aim of sport studies originates from wishes about reaching aimed succes during competition

Sport's being reached to big communities, makes it a fact which take it only being a activity out, obtains material and spiritual success at the same time.

Anxieties and questions about how to be successful at sport, how to reach to peak and how to stay at the peak make scientists interest for choosing players according to branch, determaning suitable trainig methods, presenting scientific data about performance and physical fitness according to aims (M. Duyul, 2005).

Even if there are so many documents about how soccer have appeared in world literature, it was started in England at the modern sense. (G. Carnibella el al., 1996)

Strenght, flexibility, anaerobic- aerobic power and speed have a very big importance at performing a movement in soccer

In soccer, essipecially performance and strenght are closely related with lenght, body weight, flexibility levels. At this game, to be enduranced is important as much as being speed because, soccer game is being played with high tempo in long term. For players adapting this situation, they should improve their strenght, endurance, speed, condition and flexibility properties with trainings which are based on scientific basics. (M. Duyul, 2005, H. Taşkin, 2006).

Futsal is an intermittent sport that makes high physical, technical, and tactical demands on players. It is played on a court of 40620 m with goals of 362 m (the same as in handball). As in basketball, two 20-min periods are scheduled, and here there is an important distinction from football, in that like basketball, the clock is stopped for some events, which usually means that the game lasts 75 – 85% longer than the scheduled 40 min. This varies according to the possibilities given by the rules: time-outs, double penalties, court cleaning, stoppages for injuries, medical attention, and so on. Teams can request a time-out (1 min) in each half and there is a break of 10 min between halves.

At literature, only a few studies have analyzed some antropometric and aerobic characteristic of soccer and indoor soccer players (E.M. Gorostiaga et al, 2009).

Even if these branches are basically so similiar, they are different each other according to their rules. So, it is thought that there should be physical differences of these branches' players

The aim of the study was to determine some physical parameters of in door soccer and soccer players.

Methods

Participants

At this study, elite 32 indoor soccer players and 37 elite football players were joined volunteerly. Volunteers were performed some physical measurements

Measure

Age, body weight, body lenght, Body mass index and body fat percentage measurements were done Physology Laboratory of Physical Education and Sport Collegue of Erciyes University.

The age of each volunteer was recorded and calculated from the date of birth which was written in their ID card. Body Height was measured to the nearest 0.1cm using scala

Body Weight was measured by using Bio Impedance Analysis (Tanita BC418MA)

Also body mass index was measured by using Body Impedance Analysis (Tanita BC418MA)

Body mass index was calculated as weight (kg) / height $(m)^2$ according to standards recommended by The World Health Organization (WHO, 1987).

Four sites (Biceps, Triceps, Subscapular and Supraliac) of volunteers were measured by using skinfold callipers and Body Fat Percentage was estimated by Durning and Womersley formula

Durning and Womersley Formula was described in literature as D=1,1631-0,0632X (Biceps + Triceps + Subscapular + Suprailiac) for 20-29 aged man (I. Erdemir, E. Tüfekçioğlu, 2008, F. Akça, S. Müniroğlu, 2006)

30 seconds shuttle, 10 metre sprint, vertical jump and flexibility measurements were done in Süleyman Demirel Sport Saloon of Erciyes University.

The volunteers were performed 20 minutes of individual warm up and then they performed tests.

Vertical jump was performed using a New test vertical jump meter. They performed vertical jump three times and best value was recorded

Volunteers were performed shuttle during 30 seconds and recorded how many shuttle they were performed at the end of 30 seconds

New test was used for measuring volunteers' 10 meter sprint values Volunteers had to choose which foot they had to put on the starting line for the sprint standing position start. They then performed 10 m sprints three times . Best value was recorded

Flexibility measurement was done by sit and reach test (D. Güler, 2009)

Statistical Analysis

Data were recorded on computer by using Package programe which was called SPSS. For statistical analysis between groups, independent t test was performed.

Protocol of the Study

Measurements of volunteers were done at the same time periods and enviromental conditions in Physology Laboratory of Physical Education and Sport Collegue and Süleyman Demirel Sport Saloon of Erciyes University.

Results

Table I: Comparement Of Some Physical Parameters of Soccer and Indoor Soccer Players

Parameters	Groups	n	X±SD	t	p
Age (year)	Indoor Soccer	32	22,53±0,98	3,753	**,000****
	Soccer	37	21,16±1,95		
Lenght (cm)	Indoor Soccer	32	180,16±3,17	,833	,409 ns
	Soccer	37	179,03±7,50		
Body Weight (kg)	Indoor Soccer	32	73,47±3,52	,283	,778 ns
	Soccer	37	73,24±3,04		
Body Mass Index	Indoor Soccer	32	22,64±1,03	-,876	,384 ns
	Soccer	37	22,92±1,61		
Body Fat Percentage	Indoor Soccer	32	9,68±2,38	-2,440	**,017***
	Soccer	37	11,18±2,72		
30 Seconds Shuttle	Indoor Soccer	32	16,38±2,93	10,151	**,000****
	Soccer	37	17,41±3,35		
10 metre sprint	Indoor Soccer	32	61,56±3,72	-9,398	**,000****
	Soccer	37	52,54±8,57		
Flexibility (cm)	Indoor Soccer	32	54,28±1,42	-1,349	,182 ns
	Soccer	37	46,11±4,65		
Vertical Jump (cm)	Indoor Soccer	32	3,73±0,17	5,803	**,000****
	Soccer	37	4,12±0,18		

*P<0.05,**P<0.01, ns: not significant, X±SD: mean ± standart deviation

As a result of the comparement of some physical parameters of Soccer and Indoor Soccer players according to Table I; it was not found meaningful difference at the lenght, body weight, flexibility and doyy mass index parameters (p>0.05). While meaningful difference was found about body fat percentage parameter at the level of p<0.05, meaningful differences were also found about age, vertical jump, 30 second shuttle and 30 meter sprint parameters at the level of p<0.01.

Discussion

At this study, which was aimed to compare some physical parameters of Soccer and Indoor soccer players; Meaningful difference was found at the age parameter (p<0.01). In our study we found age avarage of indoor soccer players as 22,53±0,98 (year) and soccer players' age avarage as 21,16±1,95 (year) . While H. Taşkin et al (2007) were found footbal players age avarage as 22,53 ± 2,78 (year), were found indoor soccer players age avarage as 25,6±2,5(year). The reason of finding this meaningful difference was thought that players which had more sport age, were prefered Indoor soccer.

Meaningful difference was not found at the lenght parameter (p>0.05) In our study we found lenght avarage of indoor soccer players as 180,16±3,17 (cm) and soccer players' lenght avarage as 179,03±7,50 (cm). While A. Bandyopadhyay (2007) was found soccer players' lenght avarage as 165,10±3,90, Barbero Alvarez et al (2008) were found indoor soccer players lenght avarage as 175±6 (cm). The reason of it was thought that most of thet soccer players which participated to study, were playing as mid-fielders and successful indoor soccer players and midfielder soccer players' lenght component of phsyical parameters were close sizes. Meaningful difference was not found at the body weight parameter (p>0.05). I. Guerra et al. (2004) was found body weigt of soccer players as 68,5±4,81(kg) were found body weight of indoor soccer players as 73.8± 5.7 (kg),

E.M. Gorostiaga et al. (2009) were not also found meaningful difference between Indoor soccer and Soccer players. Their findings were also similiar like our study

Meaningful difference was not found at the BMI parameter ($p>0.05$). Underlying reason of it was thouth that Both player groups were elite and they were training regularly with high intensive trainings.

Meaningful difference was found at the BFP parameter ($p<0.05$). It was thought that Mid-fielders are the most distance runners in soccer. So that, their BFP levels were lower than other position players. Indoor soccer players were close to mid-fielders as player profile.

Meaningful difference was not found at the flexibility parameter ($p>0.05$). In soccer and Indoor soccer, flexibility have important advantages for performing a technical movement or combinated technical movements. Underlying reason of not to finding meaningful difference at this parameter was thought that both of the player groups were technical players and their flexibility levels were so close to each other.

Meaningful difference was found at the vertical jump parameter in favor of soccer players ($p<0.01$). The vertical jump height itself is a good measure of specific muscular performance (E. Günay, 2008, S.M. Ostojic, 2000). E.M. Gorostiaga et al. (2009) were found meaningful difference between indoor soccers and soccer players on vertical jump parameter. Their findings were supported our findings

Meaningful difference was found at the 30 second shuttle parameter ($p<0.01$). Strenght is a basic feature (U. Wisloff et al. 1998) Underlying reason of it was thought that characteristic of Indoor soccer game was being faster than soccer, based on indoor soccer players so that Indoor soccer players' muscular strenght and endurance should be beter than soccer players

Meaningful difference was found at the 10 meter sprint parameter ($p<0.01$). The reason of it was thought that Indoor soccer was a multiple-sprints sport in which there were more high-intensity phases than in soccer. As a result of the study, Indoor soccer players were more dominant than soccer players about short timed and high intensitive excercises. We thought that this situation could be based on difference of game field sizes.

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