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ANALYSING WOMAN FOOTBALLERS' SOME PHYSICAL RATES ACCORDING TO THEIR PLAYING POSITIONS AND AGES

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ABSTRACT

Master Thesis, Physical Educatıon and Sports Department In this working, it is examined that woman footballers' some physical appropriateness rate according to their playing position and age. A hundred football volunteer -aged between 14-30 from Gazikentsport and Fıstıksports' both A team and infrastructure team,in Turkey Football Woman First League, joined in this working. Footballers were grouped according to playing positions as a goalkeeper,defence,halfback and forward. Body composition,flexibility, 10 and 20 metres speed,20 metres shuttle run ($_{VO2max}$),sargent jump and reach,agility tests were applied. In investigating footballers' sport age and positions, analysis of variance techniques in factorial arrangement was used.Also,in determining different groups,Tukey quantified predicate test was used. Footballers', over 18 years,sport age, body weight,body fat (VY%), sargent jump and reach,height are more meaningful than 17 aged footballers ($p<0,05$). Statistically footballers' playing positions cause important changes only on body weight, height and sargent jump and reach Goalkeepers' sargent jump averages are higher than halfback players. 17 and less aged groups' VO2max average is significantly higher than over 18 years sportswoman group.It is important to know the features of football's physic and performance according to playing positions and age groups. Because trainers and players can evaluate themselves thanks to this results.

Key Words: Footballers, Woman, Age, Physical Features

INTRODUCTION

By the participation of women in football increased, in addition to being psychologically strong women must be physically strong, too (Konter, 1998). The players need the physical and physiological power necessary for the football game they play. Having a good body composition due to the fact that it is a game that requires long-lasting durability can increase the success of the athlete by ensuring that the performance of the athlete reaches the highest level during the match (Sezgin et al., 2011). There are differences in the physical, physiological and motoric performances of football players playing in different positions in the football. For this reason, although the football is a team game, the training programs applied to the football players should be arranged according to the game position of each football player (Toluay, 2014). It is contemplated that in a soccer game there will be differences between the positions of the goalkeeper, defense, midfield and offensive players due to the positions and duties they play, the distance they are running, the severity of the run, the frequency and the duration. In this respect, it is important for the players to show their physical and physiological characteristics in different positions, and to change over the years according to age groups.

METHOD

This work, representing the province of Gaziantep Turkey Women's Football League, from Gazikent Sports, Fıstık Spor and it's the infrastructure team 100 footballers between the ages of 14 and 30 participated in research. Football players were analyzed according to place they play such as keeper, defender, midfielder and striker, and according to age groups, they were analyzed in two groups as 17 and under, 18 and over. All the necessary informants about the work were done and a certificate of affirmation indicating that the participation was based on voluntary principle was taken. Both study groups located for making a time measurement of the players, age, height, weight, body fat percentage, flexibility, vertical jump, agility measurement, 20 meters shuttle run 10 meters and 20 meters speed measurements (VO 2 max) tests were applied.

Collection of Data

Age, Height and Body Weight Measurement

According to the age of the footballers and the identity information, the length was made with a stadiometer (SECA, Germany) with a sensitivity level of 0.01 m and an electronic scale (SECA, Germany) with a sensitivity level of 0.1 kg.(Ekizler et al., 2006).

Body fat percentage (%)

Skin fold thickness measurements sample were taken from triceps, subscapular, suprailiac, and abdominal locations and skinfold caliper (Holtain, UK) was used for measurements. The caliper was placed approximately 1 cm away from the fingers and the thickness of the subcutaneous fat layer was recorded in millimeters by reading within 2-3 seconds of the markers on the caliper (Harrison et al., 1998; Zorba et al., 1995). In determining the percentage of fat in subjects, the Yuhasz body fat formula was used (Gribble, 2004).

Flexibility Measurement

Elasticity measurements were made with the sit-and-reach test. The soccer player's bare soles are based on the test stand, sitting at the base, stretching forward without bending their knees, extending forwardly pushes the ruler on the table and from 2 seconds to stop yawning provided to extend the maximum distance was recorded (Özer, 2001; Tamer, 2000).

Agility Measurement

Agility was tested using a zig-zag test with four 5-meter sections starting at a 100-degree angle. All tests were conducted on a synthetic enclosure, electronic time instruments have been used to record completion times. Two attempts were made for each zig-zag test with a rest of at least 2 minutes between soccer test and rest. Best performance recorded. Each straight sprint has been determined at 5 meters and each turn in the flags at 100 degrees (Lıttle, 2005).

Vertical Splash

Footballers are hoping to jump as high as possible with double legs in front of the wall hanging platform. Before the test, the normal arm length was determined in front of the platform to be tested. As a result of the test, the difference between the jump distance and the

arm length was determined and the vertical jump distance was recorded in cm. The test was repeated twice and the best results were recorded (Günay et al., 2006; Tamer, 1995).

10 Meters Speed Measurement

Soccer players are required to run 10 m at high speed with the sign of exit being held in the ready position one meter behind the starting photocell. Measurements were made with the photocells placed at the start and end of the 10 meters running distance. The test was performed two times and the best rating was recorded (Mendes et al., 2015).

20 Meters Speed Measurement

The footballers were kept in the ready position one meter behind the starting photocell and were allowed to run 20 m at maximum speed together with the sign of exit. The measurements were made with photocells placed at the beginning and end of the 20 meters running distance. The test was performed two times and the best rating recorded (Hindistan et al., 1999).

Indirect Measurement of Maximal Oxygen Consumption Capacity (VO_2Max ml/kg/dk / min)

A 20 meters shuttle running test was used for football's $_{VO2Max}$ prediction. The test is a test that starts at a running speed of 8,5 km / h and runs at a speed of 0.5 km. sup. -1 for every 1 minute running and 20 meters distance round trip. according to the protocol of 20 m shuttle run test cassette is used to determine the running speed. The test was terminated when the player was unable to catch up with the two signals or left the test. According to the result obtained, the soccer players' VO_2Max values were recorded in ml / kg / min.(Tamer, 2000).

Statistical analysis

In the classification of the data obtained at the end of the research and the calculation of the percentage differences, the factorial level Variance Analysis Technique was used. The Tukey Multiple Comparison Test was used to identify the different groups. The statistical analyzes were performed using Minitabfor Windows v.17.0 and SPSS for Windows ver.20.0 packet programs. Statistical results were evaluated at 95% confidence interval and $p < 0.05$ significance level.

RESULTS

Table 1. General descriptive statistics and multiple comparison results according to age groups

Features	Age Groups	N	$\bar{x} \pm s_{\bar{x}}$	Min.	Max.
SPORT AGE(year)	17 YEARS AND UNDER	41	2,537 ± 0,153 b	1.000	4.000
	18 YEARS AND OLDER	48	3,896 ± 0,288 a	1.000	9.000
WEIGHT(kg)	17 YEARS AND UNDER	41	46,927 ± 0,754 b	38.000	57.000
	18 YEARS AND OLDER	48	53,292 ± 0,841 a	43.000	70.000
HEIGHT(cm)	17 YEARS AND UNDER	41	1,574 ± 0,012 b	1,4	1,72
	18 YEARS AND OLDER	48	1,642 ± 0,008 a	1,5	1,73
BMI(kg/m²)	17 YEARS AND UNDER	41	18,973 ± 0,296	15,625	23,139
	18 YEARS AND OLDER	48	19,752 ± 0,299	16,4	27,1
RESTING PULSE	17 YEARS AND UNDER	41	92,200 ± 1,680 a	72.000	124.000
	18 YEARS AND OLDER	48	87,080 ± 1,110 b	68.000	104.000
BODY FAT %(mm)	17 YEARS AND UNDER	41	5,788 ± 0.000 b	5,788	5,788
	18 YEARS AND OLDER	48	12,806 ± 0,292 a	10,516	20,904
FLEXIBILTY(cm)	17 YEARS AND UNDER	41	7,061 ± 0,908	-7,3	21,9
	18 YEARS AND OLDER	48	10,692 ± 0,688	-1,3	18,2
VERTICAL SPLASH(cm)	17 YEARS AND UNDER	41	27,049 ± 0,876 b	16.000	41.000
	18 YEARS AND OLDER	48	31,438 ± 0,856 a	20.000	43.000
AGILITY(sec)	17 YEARS AND UNDER	41	6,711 ± 0,075	5,83	7,5
	18 YEARS AND OLDER	48	6,664 ± 0,076	5,05	7,8
10 M SPEED(sec)	17 YEARS AND UNDER	41	1,891 ± 0,028	1,56	2,25
	18 YEARS AND OLDER	48	5,900 ± 4,040	1,24	196.000
20 M SPEED(sec)	17 YEARS AND UNDER	41	3,362 ± 0,030	2,91	3,69
	18 YEARS AND OLDER	48	3,408 ± 0,038	2,86	3,95

(P <0.05)

When the table is examined there were statistically significant differences between the age groups in terms of age, sport age, weight, height, BMI, body fat percentage and vertical

jump characteristics in the table. Age, sport age, weight, height, BMI, body Fat percentage and vertical jump values were found to be more significant than football players 17 years and younger. On the other hand, the resting pulses of 17 years old and younger footballers were significantly higher than football players 18 years and older.

Table 2. General introductory statistics and Tukey's multiple comparison results according to the positions

Features	Positions	N	$\bar{X} \pm S_{\bar{X}}$	Min.	Max.
SPORT AGE (Year)	DEFENCE	33	3,212 ± 0,285	1.000	8.000
	FORVET	21	3,286 ± 0,391	1.000	8.000
	GOALKEEPER	11	3.000 ± 0,572	1.000	8.000
	MIDFIELDER	24	3,458 ± 0,376	1.000	9.000
WEIGHT(kg)	DEFENCE	33	50.000 ± 0,968 ab	40.000	65.000
	FORVET	21	49,330 ± 1,240 b	38.000	62.000
	GOALKEEPER	11	54,730 ± 1,940 a	46.000	70.000
	MIDFIELDER	24	49,750 ± 1,430 ab	38.000	66.000
HEIGHT(cm)	DEFENCE	33	1,622 ± 0,012 a	1,5	1,71
	FORVET	21	1,598 ± 0,016 ab	1,45	1,69
	GOALKEEPER	11	1,647 ± 0,023 a	1,47	1,73
	MIDFIELDER	24	1,590 ± 0,017 b	1,4	1,7
BMI (kg/m²)	DEFENCE	33	18,98 ± 0,318	15,625	23,6
	FORVET	21	19,324 ± 0,389	16,529	23,1
	GOALKEEPER	11	20,227 ± 0,762	16,494	25,1
	MIDFIELDER	24	19,645 ± 0,446	16,4	27,1
RESTING PULSE	DEFENCE	33	88,300 ± 1,570	76.000	120.000
	FORVET	21	90,100 ± 1,900	72.000	108.000
	GOALKEEPER	11	93,640 ± 2,240	76.000	100.000
	MIDFIELDER	24	88,500 ± 2,340	68.000	124.000
BODY FAT%(mm)	DEFENCE	33	9,221 ± 0,616	5,788	16,972
	FORVET	21	8,950 ± 0,777	5,788	16,07
	GOALKEEPER	11	10,300 ± 1,400	5,79	17,08
	MIDFIELDER	24	10,268 ± 0,833	5,788	20,904
FLEXIBILTY(cm)	DEFENCE	33	7,909 ± 0,963	-1,3	20,6
	FORVET	21	8,882 ± 0,918	1,8	15,3
	GOALKEEPER	11	7,890 ± 2,120	-7,3	18,2
	MIDFIELDER	24	11,180 ± 1,140	0,7	21,9
VERTICAL SPLASH(cm)	DEFENCE	33	28,970 ± 1,100 ab	16.000	43.000
	FORVET	21	29,380 ± 1,410 ab	20.000	43.000

	GOALKEEPER	11	33,910 ± 1,790 a	22.000	41.000
	MIDFIELDER	24	28.000 ± 1,040 b	20.000	39.000
AGILITY(sec)	DEFENCE	33	6,586 ± 0,092	5,05	7,5
	FORVET	21	6,679 ± 0,103	5,89	7,4
	GOALKEEPER	11	6,764 ± 0,185	5,75	7,8
	MIDFIELDER	24	6,791 ± 0,091	5,83	7,5
10 M SPEED(sec)	DEFENCE	33	1,902 ± 0,035	1,24	2,25
	FORVET	21	1,120 ± 9,240	1,59	196.000
	GOALKEEPER	11	1,917 ± 0,043	1,66	2,07
	MIDFIELDER	24	1,819 ± 0,035	1,56	2,15
20 M SPEED(sec)	DEFENCE	33	3,367 ± 0,036	2,98	3,72
	FORVET	21	3,405 ± 0,051	2,91	3,9
	GOALKEEPER	11	3,436 ± 0,072	2,86	3,69
	MIDFIELDER	24	3,377 ± 0,054	2,99	3,95
VO_2Max ml/kg/dk	DEFENCE	33	35.650 ± 1.110	26.000	51.600
	FORVET	21	40.870 ± 1.700	24.600	52.800
	GOALKEEPER	11	37.780 ± 2.370	27.900	49.900
	MIDFIELDER	24	38.770 ± 1.430	27.400	51.100

The differences between the mean of the positions indicated by different letters are significant ($p<0.05$).

When Table 2 is examined, the weights of the goalkeepers were significant compared to the striker players ($p <0.05$). Goalkeeper and defender players' height lengths are higher than midfield players, the vertical jump average was found to be more significant in favor of the goalkeepers than the other position players ($p <0.05$). In terms of weight, height, elasticity and vertical jump values, it was found statistically more significant in favor of football players aged 18 and over ($p <0.05$).

Table 3. In terms of VO_2Max feature, introductory statistics according to age group and place, and Tukey Multiple Comparison Test results

17 YEARS AND UNDER	DEFENCE	16	35.550 ± 2.030 Ba	26.000	51.600
	FORVET	11	46.410 ± 1.520 Aa	34.000	52.800
	GOALKEEPER	5	40.480 ± 3.910 Aba	28.900	49.900
	MIDFIELDER	9	43.140 ± 1.850 Aba	35.000	51.100
18 YEARS AND OLDER	DEFENCE	17	35.750 ± 1.060 Aa	28.600	45.800
	FORVET	10	34.780 ± 1.700 Ab	24.600	41.600
	GOALKEEPER	6	35.530 ± 2.860 Aa	27.900	47.700
	MIDFIELDER	15	36.150 ± 1.690 Aa	27.400	45.800

The differences between the mean of the positions shown in different capital letters in the same age group are significant (P <0.05).

The differences between the mean age groups indicated in different small letters in the same place are significant (P <0.05).

When Table 3 is examined, it is seen that VO2max averages were found to be higher for 17 years old and younger soccer players compared to 18 years old and over footballers (p <0.05). VO2max values were found to be 46.410 ± 1.520 for striker players in the age group of 17 and under, and in favor of midfield players in the group of 18 and over (p <0.05).

DISCUSSION AND CONCLUSION

In this study, after the demographic information of footballers (age, sports, height, body weight, body mass index) body fat percentages, agility, flexibility, vertical jump, 10 meters and 20 meters speed measurements and 20 meters shuttle run (VO_2Max) measurements and tests were applied.

When the Body Mass Index (BMI) values were taken into consideration, it was determined that goalkeepers' the body mass indexes were 20,227 ± 0,762 kg / m2 and the average body mass indexes were higher than the other athletes. The results obtained according to age and place were statistically significant (p <0.05).

According to Ingebrigtsen et al., the body mass index of upper elite female football players was 21.80 ± 1.63 kg / m2 (Ingebrigtsen et al., 2011), according to Dillern et al. 24.2 ± 0.5 kg / m 2, (Dillern et al., 2012), and the other results are as follows; Vaıdova et al. 24,2 ± 0,5 kg / m2, (Vaıdova et al., 2013), Mılenovıc et al. 21.5 ± 1.3 kg / m 2, (Mılenovıc et al., 2012), Taş et al. 21.43 ± 1.81 kg / m2 (Taş et al., 2011). On the other hand, Rodrigo et al. they found body mass index averages respectively as 23.3 ± 2.2 kg / m2 and 21.2 ± 1.4 kg / m2 in their study which they did with the control and experimental groups (Rodrigo et al., 2015).

It is possible to say that the BMI mean values of the groups in our study are similar to the other results in the literature and they are between 18.5 kg / m^2 and 24.99 kg / m^2, which are accepted by the World Health Organization (WHO) as normal.

According to the positions body fat percentage % values were found that the goalkeepers have the highest value with 10,300 ± 1,400 % (Table 2) in the other players. In studies conducted on female football players, the percentage of body fat was between 13% and 29% (Martınez et al., 2014) is similar to our findings. Arı found that the body fat percentage of female football players between the ages of 14-16 years was 17.47±3.13 % - 16.47±2.59 % and on the other hand the control and experimental groups' percentage was 15.66±4.18 % - 15.67±4.04 % (Arı, 2012), Krustrup et al. found that the body fat percentage of upper elite female football players was 18.5% (Krustrup et al., 2010), according to Silva et al. it is 17.4 ± 2.3% (Silva et al., 1999), Keane et al. female players of experimental and control groups, respectively, 23.3 ± 2.3% 27.2 ± 3.02% were identified as (Keane et al., 2010). It is possible to explain the difference of our findings with the literature, with the level of trainee, physical characteristics and the difference of living conditions in our subject group.

The elasticity values between the ages were statistically significant in favor of football players aged 18 years and over ($p < 0.05$). It was found that the middle players (11,180 ± 1,140 cm) had the highest values. There was no significant difference in the elasticity values ($p > 0.05$). According to Mendes et al. the elasticity values of the adolescents were found to be 4,8 ± 0,4 cm (Mendes et al., 2015). Rye recorded the elasticity values of girls aged 12-14 years as 19.66 ± 4.35 cm, 22.38 ± 5.29 cm (Çavdar, 2006). In the study of Keane et al. the flexibility values of the experimental and control groups were found to be 24.9 ± 6.04 cm and 20.1 ± 8.6 cm respectively in female football players (Keane et al., 2010). Imamoglu showed that the flexibility averages of female soccer players were 14,77 ± 0,63 cm , 21,97 ± 0,54 cm, respectively (İmamoglu, 2014). Factors such as applied training programs, physical characteristics and measurement methods can be shown as the cause of incompatibility with the literature.

While the goalkeepers had the highest vertical jump (33,910 ± 1,790 cm), the lowest value (28,000 ± 1,040 cm) was found in the midfield players (Table 2). In the literature, the vertical jump values of female football players are as follows; according to Thomas et al. 30.7 ± 4.1 cm, (Thomas et al., 2012), according to Arı, 25.93 ± 4.30 cm, 29.93 ± 4.11 cm in female football players, (Arı, 2012), according to Castagna et al. 29.1 ± 3.3 cm (Castagna et al., 2012), according to Aughey Wyckels et al. 45.5 ± 0.13 cm, (Aughey Wyckels et al., 2010), no the other hand Krustrup et al. before and after the competition, identified respectively as, 36 ±

1 cm. and 31 ± 4.3 cm. (Krustrup et al., 2010). It can be said that the vertical jump values are in general compatible with the literature.

When age groups and positions were evaluated, the obtained agility values were not statistically significant (p> 0.05). (Table 2). Vescovi et al. reported the illions and pro agility averages of senior female football players as 10.80 ± 0.6s, 45.17 ± 0.33s, respectively (Vescovi et al., 2011). According to the study of Keane et al. the agility averages of the experimental and control group of female football players were 17.0 ± 1.4 sec, 18.0 ± 2.4 sec, respectively (Keane et al., 2010).

This data supports our findings about agility. The fact that agility has not produced a difference between the positions suggests that agility is a special ability and that the agility in the exercises applied is not improved enough.

In our study, 10 m and 20 m sprint averages found as follows respectively; 1,891 ± 0,028 sec and 3,362 ± 0,030 sec for 17 years old and under, 1,900 ± 4,040 sec and 3,408 ± 0,038 sec for 18 years and older female football players (Table 1).

According to the results, when the average speeds of 10 m and 20 m were evaluated, it was determined that the averages were very close to each female football player (Table 2).

During the competition, female soccer players sprinted a mean of 4.8 seconds during the match and the sprint average was 2.9 s. In the same study, the results of sprinting in different play areas are the same (Gabbett et al., 2008). Thomas and his colleagues found that the footballers average speed of 10 m and 20 m were 1.69 ± 00.1 s and 3.10 ± 00.1 s, respectively (Thomas et al., 2012). Mendes and al. found that the sprint grades of 10 m and 20 m were 2.02 ± 0.01 s and 3.82 ± 0.03 s, respectively, in adolescent soccer players (Mendes et al., 2015). AugheyWyckels et al found that 20 m sprint averages were 3.47 ± 0.13 sec. (AugheyWyckels et al., 2010).

In our research, it is possible to say that the goalkeepers are the slowest group among the positions' players. It has been found that the players in the middle are faster than the players in the other positions. It is considered that increasing the running distances in the applied tests when the speed measurement is made will bring out the differences between the positions more clearly.

In our study, the maxVO2 capacities of the athletes aged 17 years and over were 40.730 ± 1.270 ml / kg / min and the maxVO2 averages of the athletes aged 18 years and over were 35.644 ± 0.793 ml / kg / min (Table 1).

Silva et al. Evaluated the maxVO2 averages of the experimental group as 47.3 ± 4.5 ml / kg / min (Silva et al., 1999). Ingebrigtsen et al., MaxVO2 averages, 52.94 ± 3.17 ml / kg / min (Ingebrigtsen et al.,2011). Keane and colleagues found that the VO2max averages of the experimental and control groups were 49.9 ± 0.1 kg / ml / min and 42.0 ± 6.8 kg / ml / min, respectively (Keane et al., 2010). Dillern et al. 48.7 ± 4.6 ml / kg / min (Dillern et al., 2012). Castagna et al. MaxVO2 averages of 52.8 ± 7.4 ml / kg / min. (Castagna et al., 2006). The Red Cross found that the average maxVO2 of female football players was 37.41 ± 3.45 mL / kg / min (Kızılet, 2006). Aughey Wyckels et al. MaxVO2 averages of 50.4 ± 6.9 ml / kg / min (Aughey Wyckels et al., 2010). In their intuition, they found that female football players' maxVO2 averages were 42,08 ± 1,55 ml / kg / min (Sezgin et al., 2011). Krustrup et al. Elite female football players investigated the physiological demands in the competition and found that the average maxVO2 of the players was 49.4 ml / kg / min (Krustrup et al., 2005). Dillern et al found 48.7 ± 4.6 ml / kg / min (Dillern et al., 2012). Castagna et al found maxVO2 averages as 52.8 ± 7.4 ml / kg / min (Castagna et al., 2006). Kızılet, found the average maxVO2 of female football players as 37.41 ± 3.45 ml / kg / min (Kızılet, 2006). Aughey Wickels et al reported maxVO2 as 50.4 ± 6.9 ml / kg / min (Aughey Wickels et al., 2010). Sezgin, in her thesis, found the average maxVO2 of female football players as 42,08 ± 1,55 ml / kg / min (Sezgin et al., 2011). Krustrup et al. Investigated the physiological demands of the elite female football players in the competition and found that the maxVO2 averages of the players were 49.4 ml / kg / min (Krustrup et al., 2005).

Consequently, in this study we examine some of the values of physical fitness according to their played position and age of the female players, and as a result it is possible to sat that weight, height, BFP%, BMI, vertical jump and resting pulse values of goalkeepers are higher than those in other positions and also it is possible to say that the values of 10 m and 20 m speed, agility and flexibility do not make a difference between the positions, but the reason of this is can be because there is no special training programs for each positions' players. When we evaluated ages, it was seen that the athletes aged 18 years and over were higher than the athletes aged 17 years and under in all values of sport age, weight, height,

BFP%, BMI, vertical jump, flexibility, agility. However, when looking at the maxVO2 capacities, it was seen that the athletes under 17 years old were better than those 18 years and older ones. It is possible to say that athletes under 17 years old run in a disciplined by considering the applied shuttle run more than the other group. In general, there are not very large differences among the positions except the goalkeepers. As it can be seen, when all the data are discussed in general, there are no significant performance differences between players. It can be thought that it is useful to make the evaluations of the goalkeepers separately from the players playing in the other positions, because the resulting differences are usually caused by the goalkeepers.

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DETERMINATION OF THE PEOPLE'S SATISFACTION WHO GO TO THE ZOO FOR RECREATİONAL ACTİVİTY

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ABSTRACT

This study done for the determination of the people's satisfaction who go to the Gaziantep Zoo in their leisure time for recreational activity.The population consists of 1316 people who came to the Gaziantep Zoo in 2014 for recreational activity. The survey done by Uysal (2005) used for data collection. The datas obtained in this study statistically analysed by using SPSS 16.0 packaged software. In data analysing; frequency, percentage, average, standard deviation used as statistical method, student t-test used forcomparing two independent groups having variables with normal distribution, ANOVA and Tukey multiple comparison tests used for comparing more than two independent groups having variables with normal distribution.As a result of the study, people who come to zoo in their lesiure time mostly inhabit in Gaziantep province, high school graduates and students prefer more to visit zoo, mostof the participants come with the advice of acquaintances, most of them spend more than an hour and a great mojority of them are pleased with the quality of services.

Key Words: Recreation, Leisure, Zoo, Satisfaction

