

Measurements of Some Anthropometric Features of Wrestlers Attending 661th Kirkpinar Oil Wrestling

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Abstract--- Our study was carried out to determine whether there are differences in the anthropometric characteristics of the fat wrestlers by measuring the height, weight and some anthropometric characteristics of the lower and upper extremities. In the research, anthropometric measurements of a total of forty wrestlers, ten (10) from Head, Underhead (Başaltı), Largemedium and Smallmedium, were taken from 2475 wrestlers who participated in the 661th Kirkpinar Oil Wrestling in 14 lengths. The ages of 40 wrestlers of different sizes range from 20 to 34 years. Height (175-192 cm) and weight (75-130 kg) increases were determined with increasing age. For each size, arm length 1, arm length 2, arm span, arm circumference, forearm circumference, thigh length, thigh circumference, leg length, leg circumference, foot length and foot width were measured. Average values are respectively for small medium sized wrestlers; 70.8 cm., 55.0 cm., 181.0 cm., 34.8 cm., 31.3 cm., 45.2 cm., 60.1 cm., 51.2 cm., 30.0 cm., for large medium size; 78.2 cm., 57.0 cm., 188.0 cm. 35.8 cm. 31.4. cm., 45.2 cm., 62.0 cm., 52.1 cm., 42.5 cm., 29.0 cm., 11.0 cm. and for the başaltı length; 80.2 cm., 63.1 cm., 193.2 cm., 37.1 cm., 33.0 cm., 45.9 cm., 64.1 cm., 52.1 cm., 42.5 cm., 29.5 cm., 11.3 cm. and 82.1 cm., 63.5 cm., 195.0 cm., 38.2 cm., 33.9 cm., 46.1 cm., 64.5 cm. for the head. 53.1 cm., 42.9 cm. 43.2 cm., 31.8 cm., 11.3 cm. found. The findings were discussed with some findings of athletes in different sports and adults of the same age. The average age of small and medium sized wrestlers participating in 661th Kirkpinar oil wrestling is lower than the average age of those wrestling in other sizes. As age increases, an increase is observed in all anthropometric measurements between heights. Between small-medium and large-medium height increase in height 0.05 weight increase at the level of 0.001: the weight increase between large, medium and underhead (Başaltı) sizes is significant at the 0.01 level. As age increases, an increase is observed in all anthropometric measurements between heights. Between small-medium and large-medium height increase in height 0.05 weight increase at the level of 0.001: the weight increase between large, medium and underhead (Başaltı) sizes is significant at the 0.01 level. It is among our main recommendations to bring together such studies on oil wrestling, to establish measurement standards for the anthropometric characteristics of oil wrestling wrestlers, and thus to form a basis for oil wrestling and scientific studies on this subject.

Keywords--- Oil Wrestling, Wrestler, Anthropometric.

I. Introduction

Wrestling is one of the oldest sports disciplines and a continuous part of daily life that started with the existence of human societies on Earth and developed with civilization (Ercegan, 1996). Today, in our country, wrestling is practiced as oily, karakucak, cushion (Freestyle and Greco-Roman). The traditional 661st Kirkpinar Oil Wrestling, which is one of the longest-running sports in the world, was completed in three days between 01-03 July 2022. Oil wrestling is organized in different regions of Turkey and in the most organized way in Kirkpinar, according to the height (weight) wrestlers (wrestlers) and their degrees. The history of Kirkpinar oil wrestling is based on the legend of the forty braves (Aykut, 1990; Gümüş, 1973). The athlete or wrestler who wrestles in the traditional oil wrestling practiced in the Ottoman and Turkish hinterlands is called "Pehlivan" from the second half of the eleventh century to the present day (Erdem, 2013). The word pehlivan is Persian. It means hearted, brave, valiant, as well as an officer, governor, large-bodied and truthful person (Kahraman, 1995). Today, in oil wrestling organizations, which are intensely held in almost every region and city in Turkey, wrestlers are categorized and wrestled with different sizes. These wrestling tribes may differ numerically according to the number of wrestlers participating in the organizations and the size of the organization. This Year (2022), 661th Kirkpinar Oil Wrestling, 14 (fourteen) lengths, from small to large, respectively; Tiny-1:141, Tiny-2:169, Incentive-1:186, Incentive-2:180, Dustbreaker:192, Foot: 218, Deck Small: 251, Deck Medium: 198, Deck Large: 100, SmallMedium Small : 428, Küçükorta Large: 125, Büyükorta: 135, Başaltı: 98, Baş Boys: 54 wrestlers registered. Studies on oil wrestling wrestlers are generally related to the physiological characteristics of the athletes. On the same subject, studies on anthropometric measurements of wrestlers, especially oil wrestlers, are mostly limited to measurement of height and weight. As there may be anthropometric differences between races, there may be differences in anthropometric measurements among athletes interested in various sports branches. For this reason, our main aim in our study was to measure the height, weight

and some anthropometric characteristics of the fat wrestlers' lower and upper extremities and to reveal whether there are differences in the anthropometric characteristics of the wrestlers. Another aim is to provide support for the studies on this subject. The study is of great importance in terms of measurements of anthropometric characteristics, being a source for studies in this field, and contributing to athletes and coaches in the selection of sports branches and talented athletes.

II. Methods

The registration and height (weight class) distinction of the wrestlers who will participate in the 661th Kırkpınar Oil Wrestling was made at Istanbul Mimar Sinan Sports Hall on 29-30 June 2022. A total of 2475 Oil Wrestlers of all sizes registered. In our study, it was performed on a total of forty wrestlers, ten (10 each) in Small Medium, Large Medium, underhead(Başaltı), and Head Lengths. Measurements were made by experts, before the competitions, in the places where the wrestlers reside, with their own permission. Anthropometric set and tape measure were used for measurements. The mean values obtained were compared with the mean values for adults in other studies. The results were analyzed with the t test. Their age ranges from 20-34 years. The following measurements were made on the wrestlers.

Height: Measurement between floor and vertex without shoes in anatomical position.

Weight: Body weight measurement while wearing light clothing.

Arm Length: Between the acromion and the processus styloideus (astylion) on the right arm.

Arm Span: The distance between the tips of the middle fingers in a standing and upright position, with the arms at the sides and parallel to the ground, palms facing forward (Yıldırım ve ark. 1988).

Arm Circumference: The circumference of the widest part of the arm while the right arm is hanging at the side.

Forearm Circumference: The circumference of the wide part of the forearm with the right arm at the side.

Thigh Length: Distance from crista iliaca to condylus lateralis on right leg.

Thigh Circumference: In a standing upright position, the circumference of the widest part of the thigh without overloading the right foot.

Leg Length: The distance between the condylus lateralis and the sole of the foot.

Leg (Calf) Circumference: Measured from the widest part of the right calf in a sitting position with the legs hanging down (Twisselmann,1969).

Foot Length: Distance between calcancare (backmost point of tuber calcanei) and acropodion (tip of longest toe) in upright position, barefoot (Yıldırım & ark 1988).

Foot Width: The distance between the most protruding points of the metatarsal bones on the bare foot in an upright position.

III. Results

Table 1: Age, Height and Weight Averages and Standard Deviations of Wrestlers Participating in Kırkpınar Oil Wrestling

Sizes:	Number of athletes (n)	Years * sd	Height (cm) * sd	Weight (kg) * sd
Small-medium Length	10	20 1,71	175 2,66	75 2,88
Large-medium Length	10	26 1,50	180 2,49	90 2,89
Underhead(Başaltı), Length	10	28 2,07	190 2,71	97 2,92
Head Length	10	34 2,68	192 2,77	130 2,18

(*) = Weight average.

(sd) =Standart Deviation.

Table 2: Some Anthropometric Measuring Averages and Standard Deviations of Wrestlers Participating in Kırkpınar Oil Wrestling

Measurement	Small-medium Length * sd	Large-medium Length * sd	Underhead(Başaltı) Length * sd	Head Length * sd
Arm Length (1)	70,8 1,93	78,2 2,07	80,2 2,41	82,1 2,72
Arm Length (2)	55,0 1,84	57,0 2,10	63,1 3,01	63,5 3,02
Arm Span	181,0 2,81	188,0 2,99	193,2 * 3,02	195,0 3,03
Arm Circumference	34,8 1,46	35,8 1,49	37,1 1,50	38,2 1,61
Forearm Circumference	31,3 1,22	31,4 1,24	33,0 1,28	33,9 1,38

Thigh Length	45,2 1,41	45,2 ** 1,41	45,9 ** 1,45	46,1 1,64
Thigh Circumference	60,1 1,95	62,0 *** 2,03	64,1 2,68	64,5 2,68
Leg Length	51,2 1,74	52,1 1,76	52,1 1,76	53,1 1,78
Leg(Calf) Circumference	30,0 1,44	42,5 * 1,68	42,5 1,68	43,2 ** 1,72
Foot Length	28,0 0,86	29,0 0,90	29,5 0,92	31,8 *** 0,96
Foot Width	10,7 0,57	11,0 0,60	11,3 0,63	11,3 ** 0,63

* p< 0.01

** p< 0.05

*** p< 0.001

IV. Discussion and Conclusion

Although there are studies examining the effects of sports activities on body shape, studies on establishing standards in various sports branches are limited (Ziylan, T. Ve Ark.,1993). In our study, some anthropometric measurements were made on 40 wrestlers in order to establish standards for oil wrestlers wrestling in various lengths. As seen in the tables, the height and weight averages of the head and head wrestlers are higher than the weight and height averages obtained by Ergen et al. in the same wrestler groups (Ergen, 1994). The reason for this may be due to the increase in the physical structure of oily wrestlers day by day. In Yıldız's study on adult Turkish men, the height was similar to the average of small-medium-sized wrestlers. Thigh and leg length, thigh circumference averages are lower than Wrestlers (Yıldız YZ.,1989). In another study conducted on 2160 adult men in Edirne, the average height obtained was found to be similar to small-medium size wrestlers (Taşkınalp &., Mesut, 1991). In the measurements made by Yıldırım et al. on adult men (151 individuals), the foot length was found to be 25.76+1.36 cm and the foot width 9.97+0.68 cm (Yıldırım, 1986). According to the results of this study, the feet of the wrestlers are longer (p<0.001) and wider than those of normal adult Turkish men. In the study conducted by Atalay et al. on swimmers consisting of five athletes, it was observed that the swimmers were taller than the Small-medium oil wrestlers of the same age, but their average weight was lower (Atalay, Ve Ark.,1994). In the same study, it is observed that the average weight of the swimmers is lower.

Conclusion; The average age of the Small Medium Length wrestlers participating in 661th Kırkpınar Oil Wrestling is lower than the average age of those wrestling in other sizes. As age increases, an increase is observed in all anthropometric measurements between heights. Height increase between small-medium and large-medium size was 0.05; weight gain at 0.001 level: The weight increase between large, medium and underhead (Başaltı) sizes is significant at the 0.01 level. As age increases, an increase is observed in all anthropometric measurements between heights. Between small-medium and large-medium height increase in height 0.05 weight increase at the level of 0.001: The weight increase between large, medium and underhead (Başaltı) sizes is significant at the 0.01 level. Between small-medium and large-medium height increase in height 0.05 weight increase at the level of 0.001: The weight increase between large, medium and underhead (Başaltı) sizes is significant at the 0.01 level. There was an increase in weight and other anthropometric measurements in wrestlers of other heights except small-medium height. From the discussions, it was determined that the swimmers were taller than the smallmedium wrestlers of the same age, and the average age of the smallmedium wrestlers was lower than the other sized wrestlers. It seems that cyclists are less in weight and runners are less in height and weight than oil wrestlers. The average height of the Smallmedium wrestlers, the average height of the same age found by Twiesselman, is similar to that of adult Turkish men, but it has been determined that the thigh and leg lengths are lower. It is among our main recommendations to bring together such studies on oil wrestling, to establish measurement standards for the anthropometric characteristics of oil wrestling wrestlers, and thus to form a basis for oil wrestling and scientific studies on this subject.

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