

## **Zeitdauern von judo-kämpfen nach verschiedenen gewichtskategorien** **Farkhod Kulbulov, Lehrer des Umschulungs- und Qualifizierungsinstituts für** **Leibeserziehung und Sport, Zweigstelle Samarkand**

**Abstrakt.** Ziel dieser Arbeit ist es, die Zeitdauern der Judo-Wettkämpfe nach Gewichtsklassen zu vergleichen. Den Ergebnissen zufolge wurden die kürzesten Kämpfe von den Judokas der Leicht- und Mittelgewichtsklasse ausgetragen. Bei den schwergewichtigen Judo-Athleten war die Wettkampfzeit länger als bei den anderen beiden Gruppen. Wir betrachten die vorherrschenden Zeitlimits als Schlüsselfaktor für die Planung von Trainingsabläufen und die Steigerung der aeroben und anaeroben Kapazitäten der Judokas.

**Stichworte:** Judo-Wettbewerbe, Zeitdauern, Gewichtsklassen, Frequenzen, Trainingsplanung.

### **Time durations of judo fights by different weight categories**

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**Abstract.** The aim of this work is to compare time durations of the judo contests by weight divisions. According to the results, the most shortest fights were occurred by the lightweight and middleweight category judokas. The heavyweight judo athletes mean contest time was found longer than other two groups. We consider that the dominant time limits are key factor for planning training processes and increasing aerobic and anaerobic capacities of the judokas.

**Keywords:** judo contests, time durations, weight categories, frequencies, planning training.

**Introduction.** Judo is one of the most popular sport in which during the competitions different technical-tactical actions are used by the athletes. For this reason some authors were given their focus to analysis competitive activity judo athletes. Different approaches were implemented for measuring and analyzing process of judo contests by the scientists (Koblev, 1979; Piloyan, 1984; Shulik, 1988; Sacripanti, 1989; Sterkowicz, 2012; Franchini, 2014; Segedi, 2014; Boguszewski, 2014; Miarka, 2019). Authors pointed that analysis of judo competitions is one of the crucial side in planning and organizing training design.

According to current IJF (International Judo Federation) in the international competitions match durations lasts 4minutes for both men and women (without the Golden Score) [1]. Observations show that all fights are not finish in same time. Our previous studies show that time durations of the different stages' competitions are differentiated from each other [2]. There were found significant differences between the stage of competitions (national and international) and between the rounds (first and second). However, literature search and reviews show that there is no studies in

which the focuses to analysis time durations of judo fights by weight categories. For this reason, this seems to justify of the following study questions (1) does the time durations of the judo fights by weight categories differentiated from each other? And (2) which weight category athletes fights' continue more longer (or shorter) than others? In that case, we have set the aim of this work is to compare time durations of different weight category judokas.

**Materials and methods.** Overall 456 judo contests were analyzed which organized in Uzbekistan between 2017-2021 years. Weight divisions were divided according to our previous classifications [3]. Time limits were justified regarding to the official contest sheets of the competition. The statistical significance within the group and statistical differences between the groups were identified. The One Way Anova was used for calculating of the data. Time durations of the fights were calculated in seconds. Statistical significance was set as  $p < 0.05$ .

**Results.** The results of this study show that time durations of contests have a different for each weight category judokas. The mean time duration, standard deviation of the time limits by weight divisions are shown it table 1.

**Table-1. Time duration of judo contests by weight categories (n=456)**

Weight categories	Mean (in seconds)	SD	p<0.05
Lightweight (n=152)	183.05	103.4	.05
Middleweight (n=152)	154.12	94.8	.05
Heavyweight (n=152)	199.74	110.1	.05

It can be seen from the table below, lightweight category judokas' mean contest time was 183.05 seconds. The most shortest fight observed from the middleweight category athletes with 154.12 seconds comparing to other groups. Middleweight judokas were fought approximately 30 seconds shorter than lightweight category judokas. Furthermore, the most longest fight were obtained by the heavyweight athletes and it consisted 199.7 seconds. The statistical significance was observed between the groups and within the groups ( $p < 0.05$ ).

Table 2 illustrates the frequencies of time durations and their counts by weight divisions of judo athletes. It can be seen from the table below, the most frequently time limits were between the 210-279 (26.3%) and 70-139 (25.7%) seconds by the lightweight judokas. For the middleweight judo athletes this indication were 0-69 (27.6%) and 140-209 (23.7%) seconds, respectively. The heavyweight category athletes significantly more longer fought and it consisted between the 240-319 seconds (33.6%).

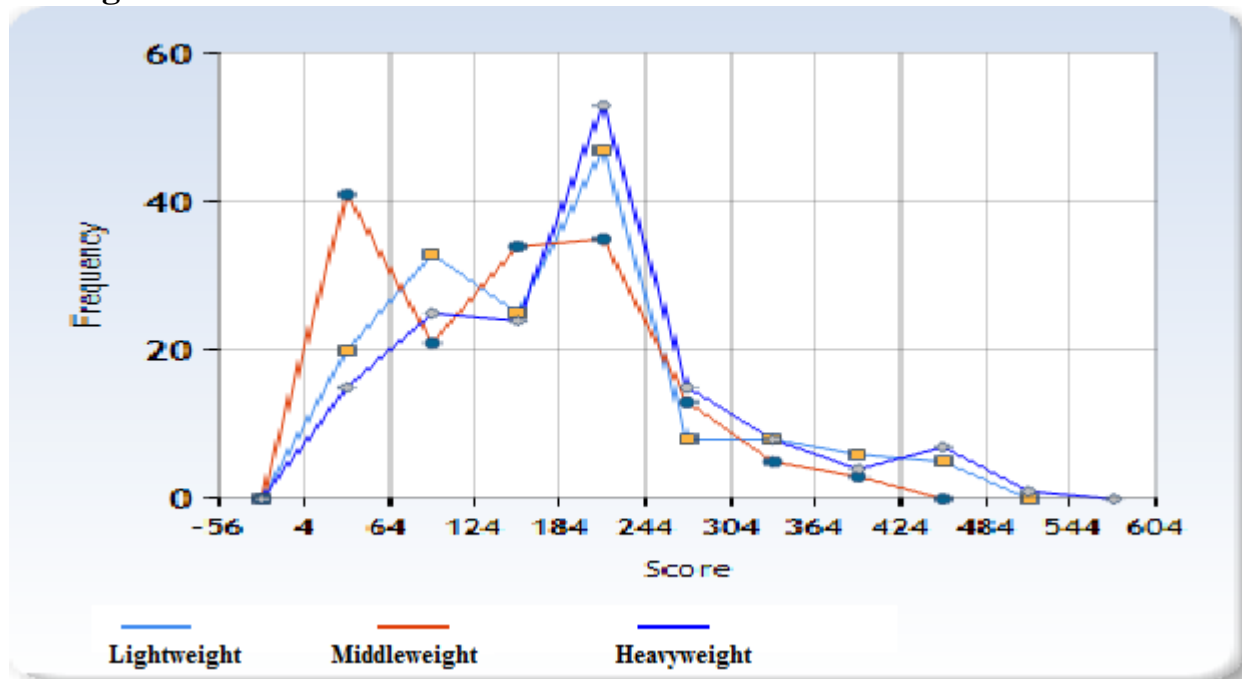
**Table-2. The frequencies, counts and percentages of the time characteristics of judo fights by weight categories (n=456)**

Class	Count	%	Class	Count	%	Class	Count	%
<b>Lightweight</b>			<b>Middleweight</b>			<b>Heavyweight</b>		
0-69	21	13.8	0-69	42	27.6	0-79	28	18.4
70-139	39	25.7	70-139	24	15.8	80-159	30	19.7
140-209	30	19.7	140-209	36	23.7	160-239	27	17.8
210-279	40	26.3	210-279	33	21.7	240-319	51	33.6
280-349	10	6.6	280-349	14	9.2	320-399	4	2.6

350-419	7	4.6	350-419	3	2	400-479	11	7.2
420-489	5	3.3	420-489	-	-	480-599	1	0.7
Total	152	100	Total	152	100	Total	152	100

As shown table 2 and figure 1, the least frequencies of the fight durations for lightweight and middleweight judokas were 350-419 (7%), 420-489 (5%) and 350-416 (2%), respectively. While, frequencies of the heavyweight athletes fights were 320-399 (2.6%) and 480-489 (0.7%) seconds.

**Figure 1. The frequencies of the time durations of judo contests regarding to weight classes**



**Conclusion.** Our analyses showed that the most frequently occurrence time differs for various weight categories. The lightweight and middleweight judo athletes fight more shorter than the heavyweight judokas.

Also, the most dominant time limits indicate to effective planning of aerobic and anaerobic training of judo athletes for different weights. The coaches should focus on time durations and the most dominant time periods of the official contests.

The results might be useful for judo specialists and coaches for successfully organizations of their athletes’ technical-tactical, physical training regarding to fight durations. Also, results of this paper clear indication of coaches for preparing of aerobic and anaerobic capacities of the judokas.

## References

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