

Modern Approaches to Athletes' Preparation.

## **IMPORTANT AGE PARAMETERS IN WRESTLING – THE DIFFERENCES BETWEEN THE EUROPEAN AND WORLD TRENDS**

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**Abstract.** What is optimal age to start doing a certain sport, how many years must one train to win the first globally relevant medal, when an athlete reaches his/her peak sport performance? All these are key issues of profession in any sport and important information for coaches in the field. These age trends have been investigated separately in GR wrestling at the European and World levels [1, 2], but no study has so far focused on the differences between them. Our research established no significant differences in age parameters between the European and World level except for the variable Peak Performance Age in lighter weight groups. This suggests that European wrestling is potent and that it follows world trends.

**Key words:** Greco-Roman (GR) wrestling, weight groups, seniors, achievements, Peak Performance Age, Beginning Age, Experience Age

**Aim of research:** Determining possible differences in certain age parameters between the Greco-Roman medalists at the European and World Championships.

**Methods:** The sample consisted of 443 GR wrestlers who won their first either the European or World Championship medal in the period of 2005 to 2015. The data were retrieved from the FILA/UWW official website that is from the public lists of medal winners and from the wrestlers' personal charts. Descriptive statistics was computed for all variables and their goodness of fit was confirmed by the Kolmogorov-Smirnov test. The differences in age parameters between Europe and the World as well as between various weight groups were tested by one-way ANOVA and Tukey's HSD test. The level of significance was set at  $p < 0.05$ .

**Results and discussion.** The general trend in age parameters is their constant decline: peak wrestling performance occurs at younger age and ever younger children start their organized training, the trend is also present in other sports [1]. Training and competition experience is also important parameter for coaches. They are often inclined to apply early sport achievement pressure on their wrestlers, which may be detrimental for both the sport and wrestler. Previous research of age parameters on the European sample has demonstrated that trend aberrations usually occur on the extremes – in either the lightest or heaviest weight groups. There is logic in these deviations due to a less competition in the extreme weight groups (light and heavy) – wrestlers of these weight groups may start their training at later age and need less training experience before their first relevant achievements that usually appear at earlier age than the “ideal” one. Such a trend, however, has not occurred at the world championships' level, probably because standard of competition is constant across all the weight groups [2].

Table 1.

**Descriptive statistics and differences between Europe and the World as well as among various weight groups (Tukey HSD test) in age parameters**

	n	Mean	SD	Min	Max
Beginning EU Light	87	9.95	2.72	4.00	15.00
Beginning World Light	84	10.92	2.80	4.00	18.00
Beginning EU Middle	49	10.08	2.64	5.00	17.00
Beginning World Middle	93	10.02	2.88	4.00	17.00
Beginning EU Heavy	78	10.56	3.00	5.00	18.00
Beginning World Heavy	52	10.73	3.34	4.00	18.00
Experience EU Light	87	14.08	3.97	4.00	26.00
Experience World Light	84	14.07	3.91	6.00	27.00
Experience EU Middle	49	15.78	3.41	10.00	24.00
Experience World Middle	93	15.86	4.20	8.00	27.00
Experience EU Heavy	78	14.85	3.98	8.00	25.00
Experience World Heavy	52	15.35	4.73	6.00	24.00
Peak EU Light	87	<b>24.03*</b>	3.06	19.00	32.00
Peak World Light	84	24.99	3.04	20.00	33.00
Peak EU Middle	49	<b>25.88*</b>	2.77	22.00	33.00
Peak World Middle	93	<b>25.85*</b>	3.06	20.00	33.00
Peak EU Heavy	78	<b>25.36*</b>	3.41	19.00	34.00
Peak World Heavy	52	<b>25.94*</b>	3.16	20.00	32.00

*\*Tukey HSD test: Peak EU Light < Peak EU Middle (p=0.02); Peak EU Light < Peak EU Heavy (p=0.04); Peak EU Light < Peak World Middle (p=0.02); Peak EU Light < Peak World Heavy (0.01).*

European wrestlers of light weight group win their medals at a significantly younger age but not in comparison to their weight group peers at the world level; they become medalists at a younger age than middle and heavy weight group wrestlers at both the European and World levels. Iranian wrestlers attract special interest. They reported a significant difference between Iranian wrestlers' starting age and six other countries (Russia, USA, Cuba, Turkey, Georgia and Ukraine). They, begin with wrestling later than other countries, but they won their first and best medals in their sport careers earlier than other countries [3].

### **Conclusion.**

The investigated medalists of all weight classes at both the European and World levels started to train wrestling at the age of  $10.38 \pm 2.90$  years and accumulated  $15.00 \pm 4.03$  years of experience before they won their first medals at the age of  $25.34 \pm 3.08$  years. The exception were European wrestlers of light classes. The study suggests potency of European wrestling which is in line with World trends.

### **Reference:**

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