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ANALYZE OF RESULTS OF THE KOSOVO SWIMMERS ALONG EIGHT YEAR PERIOD, BREASTSTROKE TECHNIQUE AT DISCIPLINES 50 AND 200 METERS

Introduction

The first purpose of this study was to analyze longitudinal swimming results at several competitions through eight years period. Our aim was to verify if it was progress of Kosovo swimmers from 2002 to 2009 respectively 2003 to 2009. This research has had the aim to see trends and changes between these years, analyzing them in breaststroke technique at 50 and 200 meters swim distance, by men senior swimmers.

Objectives

This research is focused on authentication changes in results over the years in the breaststroke technique, 50 and 200 m distance. Our aim was to analyze the results of competitions in Kosovo championships over the years from 2002 until 2009, respectively 2003 to 2009, trying to analyze the status of the achievements over the years and the trends of the results competitive level in Kosovo, senior men category of contestants, in the final competitions.

Material and Methods

The study involved eight years period in breaststroke technique senior male swimmers, at disciplines 50 and 200 meters, which was organized by Kosovo Swimming Federation, and the measures was made from licensed judges of Kosovo Swimming Federation.

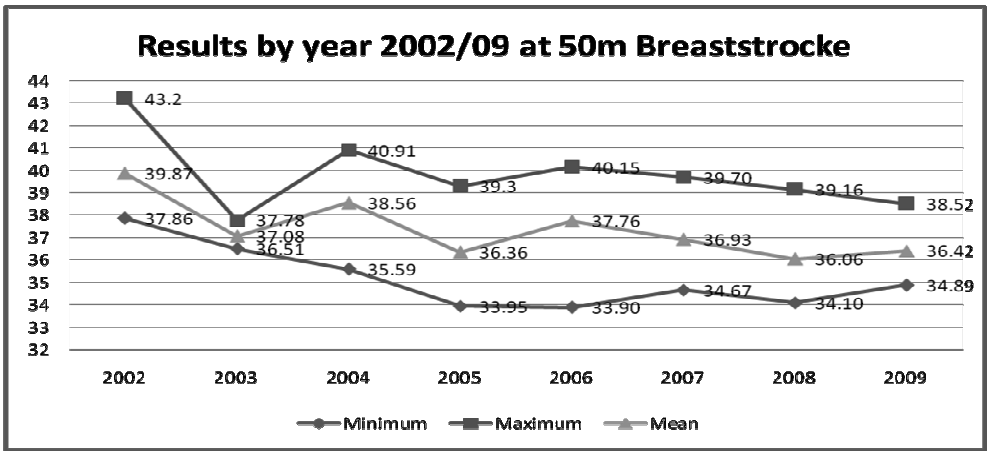
The methods used to analyze the data are standard methods using SPSS i.e. descriptive parameters, ANOVA and trend through the graphic display.

Results and Discussion

The results of the Basic Statistical parameters within years are shown through minimum, average, maximum results.

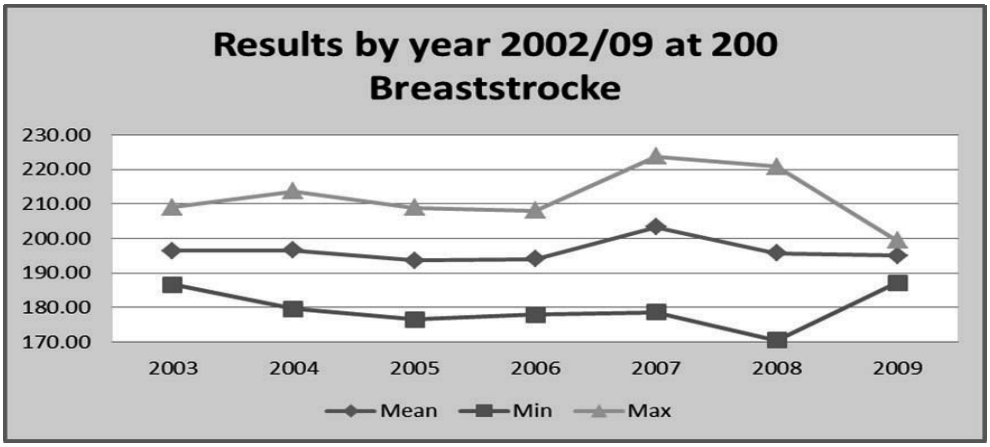
Although there was increase in the value of the best annual results as a result of the distribution of outcomes within groups that have average scores represent values statistically insignificant, except from 2002 to 2008, in the 50m breaststroke.

In tab.1. The scope of the results in 50m breaststroke discipline is shown the improved results over the years. This is evident especially in the years 2007 and 2008.



Tab.1. *Graphical presentation of results in the 50m breaststroke discipline - the years 2002 to 2009*

In the 200m breaststroke discipline noted that changes in the period 2003-2009 are too small as a whole. It is observed that the best result in this stretch was in 2008, but due to the distribution of outcomes within the group is not differentiated average score. This is noted in the results obtained through ANOVA method.



Tab.2. *Graphical presentation of results in the 200m breaststroke discipline - the years 2002 to 2009*

Through ANOVA method note that the average results in 50m breaststroke discipline is projected linear with only one statistically significant difference from 2002 to 2008, though the results have made minimal difference in almost all years, it is not

projected average outcomes as a result of the distribution the majority of results within groups.

In the 200m breaststroke discipline is not projected any important statistical average result, and this is as a result of the distribution of outcomes within groups.

ANOVA - POST HOC TEST – BREASTSROKE 50m MEN (B50m Tukey HSD)

(I) stat	(J) stat	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Y2002	2003	2.79	1.13	.242	-.84	6.42
	2004	1.31	1.13	.940	-2.32	4.94
	2005	3.51	1.13	.063	-.11	7.14
	2006	2.11	1.13	.585	-1.52	5.74
	2007	2.94	1.13	.189	-.68	6.57
	2008	3.81*	1.13	.033	.19	7.44
	2009	3.46	1.13	.071	-.17	7.08
Y2003	2004	-1.48	1.13	.892	-5.11	2.15
	2005	.72	1.13	.998	-2.90	4.35
	2006	-.68	1.13	.999	-4.31	2.95
	2007	.15	1.13	1.000	-3.47	3.78
	2008	1.03	1.13	.984	-2.60	4.65
	2009	.67	1.13	.999	-2.96	4.29
Y2004	2005	2.20	1.13	.532	-1.42	5.83
	2006	.80	1.13	.996	-2.83	4.43
	2007	1.63	1.13	.834	-1.99	5.26
	2008	2.51	1.13	.368	-1.12	6.13
	2009	2.15	1.13	.564	-1.48	5.77
Y2005	2006	-1.40	1.13	.916	-5.03	2.22
	2007	-.57	1.13	1.000	-4.20	3.05
	2008	.30	1.13	1.000	-3.32	3.93
	2009	-.06	1.13	1.000	-3.68	3.57
Y2006	2007	.83	1.13	.995	-2.79	4.46
	2008	1.71	1.13	.801	-1.92	5.33
	2009	1.35	1.13	.931	-2.28	4.97
Y2007	2008	.88	1.13	.994	-2.75	4.50
	2009	.52	1.13	1.000	-3.11	4.14
Y2008	2009	-.36	1.13	1.000	-3.99	3.27

*. The mean difference is significant at the 0.05 level.

Tab.3. *ANOVA presentation of results in the 50m breaststroke discipline – the years 2002 to 2009*

ANOVA- POST HOC TEST – BREASTSROKE 200m MEN (B200m Tukey HSD)

(I) Year	(J) Year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
V2003	V2004	-.19	8.06	1.00	-25.45	25.08
	V2005	2.80	8.06	1.00	-22.47	28.07
	V2006	2.35	7.68	1.00	-21.74	26.44
	V2007	-6.92	7.68	.97	-31.01	17.17
	V2008	.68	7.68	1.00	-23.41	24.77
	V2009	1.41	7.68	1.00	-22.68	25.50
V2004	V2005	2.99	8.41	1.00	-23.41	29.38
	V2006	2.54	8.06	1.00	-22.73	27.81
	V2007	-6.74	8.06	.98	-32.00	18.53
	V2008	.86	8.06	1.00	-24.41	26.13
	V2009	1.59	8.06	1.00	-23.68	26.86
V2005	V2006	-.45	8.06	1.00	-25.72	24.82
	V2007	-9.72	8.06	.89	-34.99	15.55
	V2008	-2.12	8.06	1.00	-27.39	23.15
	V2009	-1.39	8.06	1.00	-26.66	23.88
V2006	V2007	-9.27	7.68	.89	-33.36	14.82
	V2008	-1.67	7.68	1.00	-25.77	22.42
	V2009	-.94	7.68	1.00	-25.04	23.15
V2007	V2008	7.60	7.68	.95	-16.49	31.69
	V2009	8.33	7.68	.93	-15.76	32.42
V2008	V2009	.73	7.68	1.00	-23.36	24.82

Tab.4. *ANOVA presentation of results in the 200m breaststroke discipline - the years 2003 to 2009*

Based on the best annual results (Tab. 2.), Noted that there has been growing with good results, but as a result of the distribution of results (standard error), the average results have not shown statistical significance amongst the groups along the years(see 2008).

Conclusions

1. It is shown that an increase occurs in the results with the best results within groups, so the trend is positive.
2. Average results have normal trend as a result of the distribution of outcomes of individuals in groups.
3. The year 2003 is shown homogeneity in groups, as a result of a massive participation of competitors in competitions (preliminary, final races).

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The study has had the aim to analyze swimming at several competitions of Kosovo swimmers through eight years period from 2002 to 2009 respectively 2003 to 2009, analyzing them in two different swimming disciplines - breaststroke at 50 and 200 meters swim distance by senior swimmers. There was increase in the value of the best annual results as a result of the distribution of outcomes within groups that have average scores represent values statistically insignificant, except from 2002 to 2008, in the 50m breaststroke. In the 200m breaststroke discipline noted that changes in the period 2003-2009 are too small as a whole. Through ANOVA method note that the average results in 50m breaststroke discipline is projected linear with only one statistically significant difference from 2002 to 2008 at level 0.05.

Key words: *swimming, breaststroke technique, results, difference.*