HISTORY AND TENDENCIES IN DEVELOPMENT OF THE INTERNATIONAL ATHLETIC TOURNAMENT “NEW STARS IN ATHLETICS”

Grigor Gudev

National Sports Academy „Vassil Levski”, Bulgaria

ABSTRACT

Analyzing history can help us manage the future of athletic tournaments, improve them and make them more interesting and dynamic. For this purpose, we analyze the one of the oldest Bulgarian athletic tournaments and compared it to the world elite for the corresponding year, so we can bring out information regarding most popular disciplines and their level. The period covered by our analysis is 11 years (2009-2019). A detailed comment is made both on each discipline, group of discipline and results divided by gender. We examined sport results from the tournament and the world elite for the period of the study and compared them by results (seconds, minutes, meters) and by applying the result from IAAF scoring tables.

Key words: development, tournament, history, athletics

INTRODUCTION

Athletics tournaments are inseparable part of each national athletic association sport calendar. The oldest and still organized outdoor tournament in Bulgaria (part of Bulgarian Athletic Federation sport calendar) is “New Stars in athletics”. This fact provokes our interest to analyze it.

The athletic tournament, first called “Yordanka Nikolova” was started in 1979 by lecturers from Department “Track & Field” (NSA “Vasil Levski”), as a competition for students. After that the competition was named “New Stars in Athletics” (NSA) and became one of the pillars of modern Bulgarian athletics sport calendar (organized as tradition in the month of May). (Stoykov et al., 2006)

Aim and objectives of the study

The aim of the study is to trace and analyze “New Stars in athletics” tournament main disciplines and sport result level compared to the world elite.

As objectives of the study we analyze the last 11 years (2009-2019) of the tournament (so-called modern history) to find the most traditional disciplines for men and women in the program of the tournament. We examined sport results from the tournament and the world elite for the period of the study and compared them by results (seconds,

minutes, meters) and by applying the result from IAAF scoring tables. (Spiriev et al., 2014). Similar approaches were used in the study of Kr. Gudev (2008) and I. Dimova (2019), but different disciplines in athletics – hurdle running and heptathlon.

METHODS

A historical analysis of sport result data was the main method used for collecting sport results for the period of the study.

For the purpose of the study we use several statistical methods: descriptive statistics methods, variance analysis and frequency analysis.

The comparison was made using the best result in each studied discipline and the world best (leading) result of the same discipline for the year.

RESULTS

After applying the frequency analysis for all disciplines included in the tournament program for the studied period (2009-2019) we present the most common, we could say the traditional disciplines, for the tournament on Figure 1 (for men) and Figure 2 (for women). The disciplines are divided in three main groups: running, jumping and throwing disciplines.

Figure 1. Most common disciplines in the program of NSA tournament for the period 2009-2019 – men.

Figure 2. Most common disciplines in the program of NSA tournament for the period 2009-2019 – women.

On Table 2 we see information regarding the number of participants in NSA (average, minimum and maximum number of athletes). Both for men and women we find bigger number of participants in the running events, compared to the jump and throw events. Also, we can note larger number of participants in men group, compared to women.

Table 1. Number of participants in the main events of the NSA tournament for the studied period.

DISCIPLINE GROUPS MEN		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800	LJ	TJ	SP	DT	JT
men	avg participants	25	20	21	12	8	5	8	7	7
	max participants	40	29	26	16	13	10	12	9	10
	min participants	12	13	16	6	6	2	3	4	5
DISCIPLINE GROUPS WOMEN		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800		TJ		DT	JT
women	avg participants	13	14	9	9		5		6	6
	max participants	20	24	13	14		11		8	11
	min participants	5	5	3	3		2		5	2

For better insight, we present results comparison list on Table 2. between NSA tournament and World leading rank

Table 2. Results (average, best and weakest) from tournament and world leading rank list.

DISCIPLINE GROUPS MEN		RUNNING DISCIPLINES (TIME/SEC.)				JUMP DISCIPLINES (M)		THROWING DISCIPLINES (M)		
DISCIPLINE		100	200	400	800	LJ	TJ	SP	DT	JT
MEN	NSA avg result	10,73	21,35	48,10	1:53,88	7,61	16,11	19,17	52,93	69,27
	WL avg result	9,75	19,51	43,74	1:41,71	8,57	17,94	22,41	70,39	90,36
	NSA best result	10,47	21,06	46,95	1:51,77	7,96	16,73	20,91	58,90	74,95
	WL best result	9,58	19,19	43,03	1:40,91	8,74	18,21	22,74	71,86	92,72
	NSA weakest result	11,31	21,60	49,32	1:55,24	7,11	14,48	15,91	47,88	62,09
	WL weakest result	9,82	19,77	44,35	1:42,51	8,35	17,73	22,03	68,29	88,34
DISCIPLINE GROUPS WOMEN		RUNNING DISCIPLINES (TIME/SEC.)				JUMP DISCIPLINES (M)		THROWING DISCIPLINES (M)		
DISCIPLINE		100	200	400	800		TJ		DT	JT
WOMEN	NSA avg result	11,98	24,25	55,72	2:09,82		13,70		48,50	43,23
	WL avg result	10,73	21,90	49,31	1:56,53		15,09		69,60	68,68
	NSA best result	11,40	22,70	53,90	2:03,37		13,97		55,90	46,54
	WL best result	10,64	21,69	48,83	1:55,16		15,31		71,41	71,58
	NSA weakest result	12,61	25,05	58,26	2:19,65		13,05		42,88	41,60
	WL weakest result	10,85	22,15	49,64	1:57,67		14,85		66,40	67,30

It is hard to compared different disciplines using and women to evaluate sport results in the different only sport result measured in seconds, minutes or disciplines (the ones from the tournament and the meters. So, we use the IAAF scoring tables for men world elite rank list) – Table 3.

Table 3. Results (average, best and weakest) from tournament and world leading rank list presented in points.

DISCIPLINE GROUPS MEN (RESULT=POINTS)		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800	LJ	TJ	SP	DT	JT
MEN	NSA avg result	970	1016	975	919	1053	1070	1067	931	942
	WL avg result	1294	1298	1269	1276	1262	1265	1265	1252	1240
	NSA best result	1050	1059	1048	976	1129	1136	1175	1040	1022
	WL best result	1356	1351	1321	1301	1300	1294	1285	1279	1273
	NSA weakest result	797	981	899	882	946	899	835	838	841
	WL weakest result	1269	1256	1225	1251	1214	1243	1242	1213	1211
DISCIPLINE GROUPS WOMEN (RESULT=POINTS)		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800		TJ		DT	JT
WOMEN	NSA avg result	996	1013	987	987		1072		860	754
	WL avg result	1259	1248	1233	1225		1230		1249	1239
	NSA best result	1114	1165	1054	1094		1099		996	813
	WL best result	1280	1271	1253	1250		1252		1282	1293
	NSA weakest result	874	937	896	831		1006		757	724
	WL weakest result	1233	1222	1220	1204		1205		1189	1213

For enrichment of the analysis we analyze the difference between NSA tournament best result and

World Leading rank list in sport result and points, presented on Table 4. For men events the average gap of result from NSA and world elite vary between 195 (for Long jump) and 357 points (for 800 m). Closest to the word elite were the results from the tournament for men were Long jump, Shot put and Triple jump. All other events for men are on

similar level.

Summarized, the best discipline as sport result, part of the tournament for women is the triple jump, followed by the sprint events (100 m, 200 m and 400 m). The women javelin discipline is undoubtedly the weakest in the athletics program.

Table 4. Differences between NSA results and World Leading rank list in sport result and points.

DISCIPLINE GROUPS MEN		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800	LJ	TJ	SP	DT	JT
MEN	avg difference between NSA and WL result	0,98	1,84	2,20	0:12,17	0,96	1,83	3,24	17,46	21,08
	avg difference between NSA and WL result (points)	325	282	294	357	209	195	198	321	298
	smallest difference between NSA and WL result	0,67	1,38	2,20	0:09,26	0,40	1,00	1,12	10,60	16,33
	smallest difference between NSA and WL result (points)	226	212	193	275	87	107	67	195	231
	largest difference between NSA and WL result	0,98	1,84	2,20	0:12,17	0,96	1,83	3,24	17,46	21,08
	largest difference between NSA and WL results (points)	540	340	387	416	341	395	450	430	432
DISCIPLINE GROUPS WOMEN (RESULT=POINTS)		RUNNING DISCIPLINES				JUMP DISCIPLINES		THROWING DISCIPLINES		
DISCIPLINE		100	200	400	800	LJ	TJ	SP	DT	JT
WOMEN	avg difference between NSA and WL result	1,25	2,35	6,41	0:13,28		1,39		21,10	25,45
	avg difference between NSA and WL result (points)	263	235	246	238		158		389	486
	smallest difference between NSA and WL result	0,60	0,72	4,46	0:06,78		1,02		10,50	21,15
	smallest difference between NSA and WL result (points)	130	75	174	130		120		193	408
	largest difference between NSA and WL result	1,91	3,27	9,29	0:23,30		2,26		26,08	29,98
	largest difference between NSA and WL results (points)	392	324	351	397		246		480	569

DISCUSSION

All the data above gave information regarding the different events, but the question men or women disciplines are on better level in the NSA tournament stayed open. So, we present summarized data (results are analyzed in points) on Table 5. Women

disciplines reach better average level for the studied and best results (158 points difference between NSA and world elite). But we also find weaker result, compared to men, in the studied period for women events part of the tournament. Men events come with more stable sport results.

Table 5. *Combined level of men and women disciplines for the studied period (2009-2019).*

		average for the period 2009-2019	best for the period 2009-2019	worst for the period 2009-2019
MEN	avg difference between NSA and WL result (points)	275	195	357
WOMEN	avg difference between NSA and WL result (points)	288	158	486

Also, based on the number of participants and results from the studied period we can concluded that running events were on higher level, compared to jumping and throwing events.

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Corresponding author:

Grigor Gutev, PhD

Department “Track & Field”

National Sports Academy “Vassil Levski”,

Studentski grad, 1700

Bulgaria, Sofia,

E-mail: grigor.gutev@gmail.com