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Original scientific paper

THE DIFFERENCES IN BASIC AND SPECIFIC MOTOR SKILLS OF JUNIOR LEAGUE HANDBALL PLAYERS IN KOSOVO (MALES)

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Abstract

This scientific paper is based on 20 male handball players, active players from four handball junior teams which they compete in regular competition in Handball Federation, Kosovo. The five players were from four different teams, H.C. "Trepça" from Mitrovica, H.C. "Kastrioti" from Ferizaj, H.C. "Bashkim Idrizi" from Gjakova, H.C. "Prishtina" from Prishtina, all of them was from the back position in the field. In this research are applied nine motor basic and specific motor skills variables which we think is enough for this research paper: Sprint 40 m, Long jump, haut jump, throwing medicine ball 3 kg, hand taping, Sprint 3x9 m, zigzag Sprint 6-9 m, throwing 7 m (penalty), Throwing the ball in goal with 3 speed sprint.

The data was analyzed by statistical package, they are processed in the SPPS program, version 20.0 for windows. Scientific research is done in the composition of the motor space. The processing of results is done in these statistics methods. In the motor space parameters are calculated: by T-test for independent entities.

The first purpose of the research was to evaluate basic and specific motor skills of handball players who should verify the differences between variables in the motor space, while the purpose of the research, is the evaluation of the differences in basic and specific motor skills of the four groups at the same time, but also to confirm the performance from basic and specific motor skills, the players who compete in the same rank in the Kosovo Handball Championship.

Keywords: Handball, boys, junior league, motor space, t-test

Introduction

Handball is a collective sport game which is different and has too many special movements, such as coordination and speed, which needs force, resistance and high precision.

Like in every sport, if we want to have successes and good results, which is the main goal of sport players and professional collaborators (Selimi, M. 2001; Srhoj,V., Marinovic,M., & Rogulj,N. 2002; Hoppe,W.M., Brochhagen,J., Baumgart,Ch., Bauer,J., & Juergen. 2017; Ghobadi,H., Rajabi, H., Farzad, B., Bayati,M., & Jeffreys,I. 2013;Muratovic,A., & Bojanic,D. 2016; Muratovic,A., Vujovic,D., Bojanic,D., & Georgiev,G. 2014; Arifi,F., Bjelica,D. & Masanovic,B. 2019), we must exercise a lot.

From the scientific literature it is known that handball game is consisted of many complex anthropological characteristics and the intensity, agility, explosive strength and speed are essential in performing as much motor space as possible, similar researches in the field of handball were done by the authors (Koca, A. 2009; Vuleta et al., 2006; Ghobadi,H. et.al 2013;

Srhoj,V., Marinovic,M., & Rogulj,N. 2002; Muratovic et al., 2014; Toverlani,H.A., Ameti,V. & Memishi,SH. 2019).

The first purpose of this research was to evaluate basic and specific motor skills of handball players who should verify the differences between variables in the motor space, while the purpose of the research, is the evaluation of the Anthropological structure of the four groups at the same time, but also to confirm the differences between the variables in the motor space, the players who compete in the same rank in Kosovo′s Handball Championship.

Through this scientific paper we will try to confirm the performances from each clubs in basic and specific motor skills and their differences in basic motor skills of handball players of four different teams and cities in Kosovo.

Materials & Methods

In this research were included 20 male handball players, active players from four handball Junior teams which they compete in regular competition in Handball Federation of Kosovo (Alaj et al., 2015; Koca, A. 2009;). The five players were from four different teams, H.C. "Trepça" from Mitrovica, H.C. "Kastrioti" from Ferizaj, H.C. "Bashkim Idrizi" from Gjakova, H.C. "Prishtina" from Prishtina, all of them were from the back position in the field.

In this research were applied nine basic and specific motor skill variables which we think is enough for this research paper: sprint 40 m, long jump, high jump, throwing medicine ball of 3 kg, hand taping, sprint 3x9 m, zigzag sprint 6-9 m, throwing the ball in the goal with 3 speed sprint.

The data were analyzed by statistical package; they are processed in the SPPS program, version 20.0 for windows. Scientific research is done in the composition of the motor space. The processing of results is done in these statistics methods.

- The data have been analyzed through descriptive parameters and T-test for independent entities.

Results and Discussion

Table 1 shows nine variables from basic and specific motor skills, which we think are important for this paper. The statistics results from this table are for all Junior handball teams, which they competed in Handball Junior League in Republic of Kosovo. The teams are: Trepcha, Kastrioti, Prishtina, Bashkim Idrizi: results from Sprint 40 m, the minimal is 5.03sec., maximal is 6.47 sec, the average and standard deviations (mean±SD) 5.75±0.35, for Long jump the minimal result is 193.6 cm, maximal is 260.23 the average and standard deviations is 218.5±16.77, Haut jump, the minimal is 29.41 cm, maximal is 75.44 the average and standard deviations is 49.62±11.01, Throwing the medicine ball of 3kg, the minimal result is 4.87 cm, maximal is 9.95cm the average and standard deviations is 6.92±1.35, Hand taping the minimal result is 26.44 , the maximal is 46.00 and the average and standard deviations is 37.00±5.02. Sprint 3x9 the minimal is 13.81sec, maximal is 22.66 the average and standard deviations 17.32±2.14, zigzag sprint 6-9m are the minimal is 8.63, maximal is 16.32 the average and standard deviations 12.43±1.71. Throwing 7m (penalty) the minimal is 4.00, maximal is 8.00 the average and standard deviations 5.70±1.41. Throwing the ball in goal with 3 speed sprint the minimal is 14.22sec., maximal is 16.50sec., the average and standard deviations 15.27±0.66.

Table 1. Basic statistical indicators of measurements in motor space

Variables	N	Min.	Max.	Mean & SD	Skew.	Kurt.
Sprint 40 m	20	5.03	6.47	5.75±.35	.109	.133
Long jump	20	193.36	260.23	218.50±16.77	.819	.408
Haut jump	20	29.41	75.44	49.62±11.01	.480	.405
Throwing the med.ball 3kg	20	4.87	9.95	6.92±1.35	.599	-.135
Hand taping	20	26.44	46.00	37.00±5.02	-.286	-.001
Sprint 3x9m	20	13.81	22.66	17.32±2.14	1.066	1.244
Zigzag sprint 6-9m	20	8.63	16.32	12.43±1.71	.028	.825
Throwing 7m (penalty)	20	4.00	8.00	5.70±1.41	.101	-1.375
Throwing the ball with 3speed sprint	20	14.22	16.50	15.27±.66	.160	-.765

In this paper we have applied T- test analysis for independent groups for each variable in basic and specific motor space in handball game. By using this method, we have achieved to prove the changes in two arithmetic averages between the four teams.

To reach the authentication of statistics changes between four teams, through T- test analysis on this occasion we have proved the changes from H.C" Kastrioti" from Ferizaj which is the in first group, in the second group is "Trepcha" from Mitrovica, in the third group is "Prishtina" from Prishtina and in the fourth group is "Bashkim Idrizi" from Gjakova. These fourth teams are in the first four positions in Kosovo′s handball junior championship.

Based on the results presented in the Table 2 we can conclude that we have gained valid changes in basic and specific motor skills between two teams, H.C. "Kastrioti" and H.C. "Trepcha", valuable changes are gained in three variables in favor of H.C. "Trepcha ", Long jump with value of .005, Throwing medicine ball 3 kg with value of .008, and in favor of H.C. "Kastrioti", Zigzag sprint 6-9 m with value .011.

Table 2. T- test between two groups in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Kastrioti	5	5.53± .21	.095
	Trepça	5	5.73±.10	
Long jump	Kastrioti	5	210.53±7.51	**.005**
	Trepça	5	231.86±9.56	
Haut jump	Kastrioti	5	45.49±8.95	.380
	Trepça	5	54.27±18.61	
Throwing the medicine ball 3kg	Kastrioti	5	6.60±.93	**.008**
	Trepça	5	8.64±.91	
Hand taping	Kastrioti	5	35.17±5.13	.599
	Trepça	5	33.45±4.80	
Sprint 3x9m	Kastrioti	5	16.38±.85	.200
	Trepça	5	15.53±1.05	
Zigzag sprint 6-9m	Kastrioti	5	13.58±1.67	**.011**
	Trepça	5	10.47±1.17	
Throwing 7m(penalty)	Kastrioti	5	5.40±1.51	.684
	Trepça	5	5.80±1.48	
Throwing the ball with 3speed sprint	Kastrioti	5	15.21±.49	.498
	Trepça	5	14.97±.57	

While in table 3 are presented the results between H.C. “Kastrioti” and H.C. “Prishtina”, on motor space where we have gained changes in Sprint 40 m with value of .030.

Table 3. T- test between two groups which are tested in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Kastrioti	5	5.53±.21	**.030**
	Prshtina	5	5.99±.31	
Long jump	Kastrioti	5	210.53±7.51	.554
	Prshtina	5	218.14±25.64	
Haut jump	Kastrioti	5	45.49±8.95	.673
	Prshtina	5	48.03±9.39	
Throwing the medicine ball 3kg	Kastrioti	5	6.60±.93	.579
	Prshtina	5	6.18±1.30	
Hand taping	Kastrioti	5	35.17±5.13	.180
	Prshtina	5	39.60±4.33	
Sprint 3x9m	Kastrioti	5	16.38±.85	.153
	Prshtina	5	18.85±3.11	
Zigzag sprint 6-9m	Kastrioti	5	13.58±1.67	.135
	Prshtina	5	12.12±.85	
Throwing 7m (penalty)	Kastrioti	5	5.40±1.51	1.000
	Prshtina	5	5.40±1.67	
Throwing the ball with 3speed sprint	Kastrioti	5	15.21±.49	609
	Prshtina	5	15.49±1.04	

On the table 4 are presented the results between H.C.” Kastrioti” and H.C.” Bashkim Idrizi”, where are presented important results on the variables of Sprint 3x9m with value of .003, on favour of. H.C.” Kastrioti”

Table 4. T-test between two groups tested in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Kastrioti	5	5.53±.21	.418
	B.Idrizi	5	5.76±.54	
Long jump	Kastrioti	5	210.53±7.51	.662
	B.Idrizi	5	213.82±14.17	
Haut jump	Kastrioti	5	45.49±8.95	.272
	B.Idrizi	5	50.71±2.88	
Throwing the medicine ball 3kg	Kastrioti	5	6.60±.93	.486
	B.Idrizi	5	6.25±.49	
Hand taping	Kastrioti	5	35.17±5.13	.145
	B.Idrizi	5	39.80±3.70	
Sprint 3x9m	Kastrioti	5	16.38±.85	**.003**
	B.Idrizi	5	18.53±.74	
Zigzag sprint 6-9m	Kastrioti	5	13.58±1.67	.989
	B.Idrizi	5	13.56±.92	
Throwing 7m (penalty)	Kastrioti	5	5.40±1.51	
	B.Idrizi	5	6.20±1.30	.398
Throwing the ball with 3speed sprint	Kastrioti	5	15.21±.49	
	B.Idrizi	5	15.41±.50	.552

On the table 5 are presented the results between H.C.” Trepcha” and H.C.” Prishtina”, on this occasion the results have shown two important statistics in motor space to Throwing medicine

ball 3kg in favour of H.C.” Trepca” with value of 0.010 and the variables Zigzag Sprint 6-9 m with values .0.38.

Table 5. T-test between two groups which are tested in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Trepça	5	5.73±.10	.145
	Prishtina	5	5.99±.31	
Long jump	Trepça	5	231.86±9.56	.312
	Prishtina	5	218.14±25.64	
Haut jump	Trepça	5	54.27±18.61	.528
	Prishtina	5	48.03±9.39	
Throwing the medicine ball 3kg	Trepça	5	8.64±.91	**.010**
	Prishtina	5	6.18±1.30	
Hand taping	Trepça	5	33.45±4.80	.067
	Prishtina	5	39.60±4.33	
Sprint 3x9m	Trepça	5	15.53±1.05	.075
	Prishtina	5	18.85±3.11	
Zigzag sprint 6-9m	Trepça	5	10.47±1.17	**.038**
	Prishtina	5	12.12±.85	
Throwing 7m(penalty)	Trepça	5	5.80±1.48	.700
	Prishtina	5	5.40±1.67	
Throwing the ball with 3speed sprint	Trepça	5	14.97±.57	.366
	Prishtina	5	15.49±1.04	

On the table 6 are presented the results between H.C.” Trepca” and H.C.” Bashkim Idrizi”, on this occasion are presented some different important variables in motor space which are in favour of H.C. “Trepcha”, Long jump with value .050 and Throwing the medicine ball 3kg with value .002, Hand taping with value .049, Sprint 3x9 with value .001 and the variable of Zigzag Sprint 6-9 m with value .002.

Table 6. T-test between two groups which are tested in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Trepça	5	5.73±.10	.916
	B.Idrizi	5	5.76±.54	
Long jump	Trepça	5	231.86±9.56	**.050**
	B.Idrizi	5	213.82±14.17	
Haut jump	Trepça	5	54.27±18.61	.693
	B.Idrizi	5	50.71±2.88	
Throwing the med.ball 3kg	Trepça	5	8.64±.91	**.002**
	B.Idrizi	5	6.25±.49	
Hand taping	Trepça	5	33.45±4.80	**.049**
	B.Idrizi	5	39.80±3.70	
Sprint 3x9m	Trepça	5	15.53±1.05	**.001**
	B.Idrizi	5	18.53±.74	

Zigzag sprint 6-9m	Trepça	5	10.47±1.17	**.002**
	B.Idrizi	5	13.56±.92	
Throwing 7m(penalty)	Trepça	5	5.80±1.48	.663
	B.Idrizi	5	6.20±1.30	
Throwing the ball with 3speed sprint	Trepça	5	14.97±.57	.239
	B.Idrizi	5	15.41±.50	

On the table 7 are presented the results between H.C." Prishtina" and H.C." Bashkim Idrizi", important valuable statistics are presented only in the variables of Zigzag sprint 6-9 m in favour of H.C." Prishtina" with value.034

Table 7. T-test between two groups tested in motor space

Variables	Group	N	Mean & SD	Sig.
Sprint 40 m	Prishtina	5	5.99±.31	.449
	B.Idrizi	5	5.76±.54	
Long jump	Prishtina	5	218.14±25.64	.753
	B.Idrizi	5	213.82±14.17	
Haut jump	Prishtina	5	48.03±9.39	.570
	B.Idrizi	5	50.71±2.88	
Throwing the med.ball 3kg	Prishtina	5	6.18±1.30	.920
	B.Idrizi	5	6.25±.49	
Hand taping	Prishtina	5	39.60±4.33	.939
	B.Idrizi	5	39.80±3.70	
Sprint 3x9m	Prishtina	5	18.85±3.11	.829
	B.Idrizi	5	18.53±.74	
Zigzag sprint 6-9m	Prishtina	5	12.12±.85	**.034**
	B.Idrizi	5	13.56±.92	
Throwing 7m(penalty)	Prishtina	5	5.40±1.67	.425
	B.Idrizi	5	6.20±1.30	
Throwing the ball with 3speed sprint	Prishtina	5	15.49±1.04	.877
	B.Idrizi	5	15.41±.50	

Discussion

The data was analyzed by statistical package, they were processed in the SPPS program, version 20.0 for windows. Scientific research is done in the composition of the motor space, the processing of results is done in these statistics methods. In the motor space parameters are calculated: by T-test for independent entities.

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The first purpose of the research was to evaluate basic and specific motor skills of handball players who should verify the differences between variables in the motor space, while the purpose of the research is the evaluation of the differences in basic and specific motor skills of the four groups at the same time, but also to confirm the performance of basic and specific motor skills, the players who compete in the same rank in the Kosovo Handball Championship.

To reach the authentication of statistics changes between four teams, through T- test analysis on this occasion we have proved the changes from H.C" Kastrioti" from Ferizaj which is the first group, on the second group is "Trepcha" from Mitrovica, on the third group is "Prishtina" from Prishtina and the fourth team is "Bashkim Idrizi" from Gjakova. These four teams are in the first four positions in Kosovo′s handball junior championship.

Finally, we may say that by having gained results from this research, we have achieved the main purpose. The result of this scientific paper also confirms the necessity for developing the same models for other handball clubs in Kosovo.

By analyzing the results achieved by handball players from Kosovo can give us the opportunity to compare some variables with handball players of the same age of other countries who have developed the handball game at a high level.

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