Proceeding

Development of motor skills applied to basketball in the developmental age

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ABSTRACT

Usually, the training planning large amounts of technical skills and tactical work are planned, neglecting the part of athletic physical training, while it is necessary to combine the athletic phase with the technical one according to principle of the complexity of the sports performance that integrates the quantitative part with to the qualitative one. The study aims to show whether specific workouts aimed at developing and consolidating the basic motor patterns then lead to an improvement in performance in basketball, which is not only athletic but also technical and tactical components. Surveys were carried out every two months taking into account the evolutionary phase of the athletes, monitored on height and weight, in some there was an improvement and then a deterioration, while for others there was a constant improvement. This study helps to use the test administration method to monitor the correlation between training and performance activities. **Keywords**: Running test; BMI; Weight; Height.

INTRODUCTION

Basketball is a team sport that emphasizes the quantitative aspects of performance, strength-endurance-speed at the highest levels, and qualitative technical and tactical aspects (Raiola, 2017, Raiola Di Tore, 2017, Raiola, 2013, Gaetano, 2012, D'elia et al, 2018), technical fundamental-offensive and defensive schemes-tactical strategies (Altavilla, Raiola, 2019, 2015, 2014, Altavilla et al, 2018). In the high level competition there is an effective balance between the quantitative performance part and the technical, tactical and strategic qualitative one because of the team of technicians, coaches and athletic trainers is wide and experts (Izzo, Varde'i, 2018, Izzo, Bertoni, 2017). Every educator, such as teacher, trainer, coach, technician, has to know the basis of sport education and performance (D'elia, 2019, D'elia et al, 2018, D'Isanto, 2019, Raiola et al, 2018, Sanseviero et al, 2019). In competitive youth competitions everything is left to the coach who, due to competitive needs about technical-tactical skills, neglects the aspect of development of athletic motor skills. The role of the body and movement is the most important cultural aspects in skill learnings first of all, for physical activity (Ceciliani, 2019, Ceciliani et al, 2005, D'Isanto, 2016, Valentini et al, 2018ab) and sport in ecological vision (Di Tore et al, 2017)Thus, in the annual training plan, large amounts of technical and tactical work are planned, neglecting the part of athletic physical training, while it is a duty to combine the athletic phase with the technical one by virtue of the principle of the complexity of sports performance which integrates the quantitative part with the qualitative one. The study aims to highlight that motor skills training is necessary and testing can be used as a monitoring in training activities to check the athletic and physical condition of the athlete and the entire team. From this point of view, there will certainly be improvements, even from a technical and tactical aspects, such as to compete with greater probability of success.

METHOD

The method is experimental based on data collection before and after training activities. Typical speed tests of youth basketball were used. The tests, on 24 meters and 48 meters, were subjected to a sample of 12 male players (amateur team under 14), aged between 13 and 14 years. The data was collected at the beginning and at the end of a period of about 6 months of training (from October to March): mean and standard deviation of anthropometric data. The statistical analysis of the data was conducted with a T-Test to verify the difference between pre and post training. The significant difference was fixed with $p < 0.05$. To have a numerical feedback and to verify the validity of this method of approach to the workouts we have administered tests on the 24 meters taking into account that the players in the game situation, offensive transition is the distance travelled, and on 48 meters holding two actions of play an offensive and a defensive and as further proof that this approach brings improvements the average points scored at each game went up by 3.1 per race. Before each workout, a 15-minutes session was reserved to work on joint mobility and general motor skills. Starting point is the weight and height of each athlete, followed by their timed times on the 24 (length of the basketball court) and 48 meters (round-trip of the basketball court).

RESULT

Table 1. - Recruitment carried out 23 October 2018

Athletes	Height	Weight	24 Mt	48 Mt	BMI
1	1.53	38.3	5.31	10.75	17.1
2	1.61	48.1	4.67	9.87	19.9
3	1.63	58.8	4.88	9.88	22.6
4	1.59	59	5.75	11.62	23.1
5	1.78	95.4	5.84	11.94	29.9

6	1.54	49.7	4.75	11.5	20.3
7	1.58	58	5.34	10.21	21.5
8	1.65	50	5.12	10.47	19.2
9	1.51	44	5.43	10.81	19
10	1.78	66.5	5.66	10.81	21.2
11	1.6	59	5.31	10.68	22.6
12	1.58	47.6	5.56	10.97	19
Media	**1.615**	**56.2**	**5.30**	**10.79**	**21.28**
SD	**0.08**	**14.02**	**0.37**	**0.62**	**3.11**

Table 2. Recruitment carried out 8 March 2019

Athletes	Height	Weight	24 Mt	48 Mt	BMI
1	1.55	41.05	4.72	9.94	17.1
2	1.63	52.4	4.32	8.64	19.9
3	1.63	60	4.32	9.51	22.6
4	1.61	59.4	5.04	10.47	23.1
5	1.8	97	5.98	11	29.9
6	1.57	50	4.65	11	20.3
7	1.67	59.6	4.45	9.03	21.5
8	1.66	52.7	3.92	9.43	19.2
9	1.54	44.1	4.71	10.48	19
10	1.79	67.6	4.58	10.28	21.2
11	1.63	60	4.65	9.44	22.6
12	1.59	47.8	4.65	11.06	19
Mean	**1.64**	**57.64**	**4.67**	**10.02**	**21.28**
SD	**0.08**	**13.94**	**0.48**	**0.78**	**3.11**

Tables n. 3 and n. 4 show a significant difference in the work done during the period from October to March, therefore the improvement in performance is confirmed. Instead, tables 5 and 6 show a high correlation between the height and weight variables in the two pre and post training periods (October and March); indeed at the end of the training period (March) there is a further correlation increase (0.869).

Table 3. Difference on 24 mt (October - March)

T-test

	Paired differences					t	gl	Sign. (with two tails)
	Mean	SD	Mean standard error	Mean standard error 95%				
				Lower	Upper			
VAR01 - VAR02	.63583	.38696	.11170	.38997	.88169	5.692	11	.000

The significant difference was set with p <0.05.

There is a significant difference in the shot at 24 meters between the two time series (October and March).

Table 4. Difference on 48 mt (October - March)

T-test

	Paired differences					t	gl	Sign. (with two tails)
	Mean	SD	Mean standard error	Mean standard error 95%				
				Lower	Upper			
VAR01 - VAR02	.76917	.43402	.12529	.49340	1.04493	6.139	11	.000

The significant difference was set with p <0.05.

There is a significant difference in the shot at 48 meters between the two time series (October and March).

Table 5. Correlation Height - Weight (October)

		VAR00001	VAR00002
VAR00001	Correlation of Pearson	1	.818**
	Sign. (two tails)		.001
	N	12	12
VAR00002	Correlation of Pearson	.818**	1
	Sign. (two tails)	.001	
	N	12	12

**. Correlation is significate at level 0.01.

Table 6. Correlation Height - Weight (March)

		VAR00001	VAR00002
VAR00001	Correlation of Pearson	1	.869**
	Sign. (two tails)		.000
	N	12	12
VAR00002	Correlation of Pearson	.869**	1
	Sign. (two tails)	.000	
	N	12	12

**. Correlation is significate at level 0.01.

DISCUSSION

Tables 3 and 4, through the elaboration of the t-test, confirm the improvements on the 24 meters and on the 48 meters during the period October-March; therefore it means that the pre and post training group achieved a significant difference with respect to the p-value, set with p <0.05. Tables n. 5 and. 6 show that there is a high correlation (0.818) between height and weight in the first period (October) and is confirmed, indeed there is a further increase (0.869), at the end of the training period (March).

CONCLUSION

If you only work in projections of the games the boys' growth is reduced only to situations experienced in training, surely the type of training chosen has long periods of time, but aims at making each athlete autonomous both in the choices and in the situations putting every athlete in the best condition to be able to interpret game situations effectively. This study helps to use the test administration method to monitor the correlation between training and performance activities as tool for coaching.

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