

## Training and performance in the transition period

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### ABSTRACT

Aim of study was to analyze and estimate how much is the reduction or the improvement of the performance, in two groups, before and following the transition period, to organize the training annual planning effectively. The study was performed on two groups of 12 female basketball players (Group A=U16 and group B=U20) and have been carried out physical and anthropometric tests at the end of regular season and the beginning of next one; more over the group U16 continue with the trainings during transition period, while the group U20 not continue the trainings. At the beginning of the transition training period (in June), physical and motor data were collected, such as mean and standard deviation. The statistical analysis of data foresees the use Test t student for estimate the performance in the two groups about transition period (June-September) and between the two groups in September; while has been used Circuit Skills Test. The significant difference was set with  $p < 0.05$ . The results show that there is a significant difference between the two groups in September ( $p=0.001$ ). For the group B (that not continue the training during the transition period) there is no a significant difference ( $p=0.075$ ); while for the group A (that continue the training during transition period) there is a significant difference ( $p= 0.004$ ). These analyze and evaluate of the reduction or the improvement of the performance allow at the coaches of monitor the training process, to design the training load for an effective performance. **Key words:** Basketball; Circuit skill test; Training annual; Team performance.

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## INTRODUCTION

The transition period is an important phase between the two annual training plans, that usually permit physical and psychological recovery through a complete rest with hanging or decrease (of intensity, volume and frequency) of physical activity. During this period, even if occur injuries or rehabilitation, the athlete should consider an active rest. The contents of this period may change, but usually support psychological rest and physical regeneration, according to different approaches that could affect significantly the performance when the athlete start the new preparatory phase.

Commonly transition period is approached with a complete rest and an interruption of physical activity, going off-season, but if inactivity is prolonged it could encourage a significant detraining effect that will decrease physiological and performance capacity (Bompa, 2018). An alternative approach consist in unstructured, non-sport-specific and recreational activities, performed at low intensities with low volume.

The present study focus on the different content that are typical during the transition period of young basketball athletes, with particular reference to the effects of the off-season approach on the performance of the athletes, in order to underline the strategic role of the transition period and the importance of an adequate planning of this period too.

## AIM

Aim of study has been to propose to basketball players a different approach in the transition period, analysing the impact in term of reduction, invariance or improvement of the performance before and after the transition period, in order to plan effectively the annual training.

## METHODOLOGY

Experimental research has been carried out. Participants were divided into two groups, each of one was made up of 12 female basketball players (Group A=U16 and group B=U20). Physical (circuit skills) and anthropometric (height-weight) tests (Table 1) were administered at the end of regular season (June) and the beginning of next one (September), so the transition period lasted 8 weeks. The group U16 (Group A) goes on the annual training also during transition period, while the group U20 (Group B) opted for complete rest with no structured and organized physical activity. At the beginning of the transition training period, physical and motor data were collected, such as mean and standard deviation.

The statistical analysis of data foresees the use Test t student for estimate the performance in the two groups during transition period (July-August) and between the two groups in September; while Circuit Skills Test (Fig.1) were administered (group A – B) to check speed and coordination. In the circuit skills the athlete decides when to start, glides to his or her left and then returns, always gliding back to the first cone. He/she runs forwards until he/she touches the red cone, then runs backwards until he/she touches the blue cone.

At this point he/she runs forward again making a slalom between the 3 cones, at the exit he/she heads in the 3 circles jumping on even feet; finally, he/she runs fast passing between the two cones placed on the side line of the field (Forte et al., 2018).

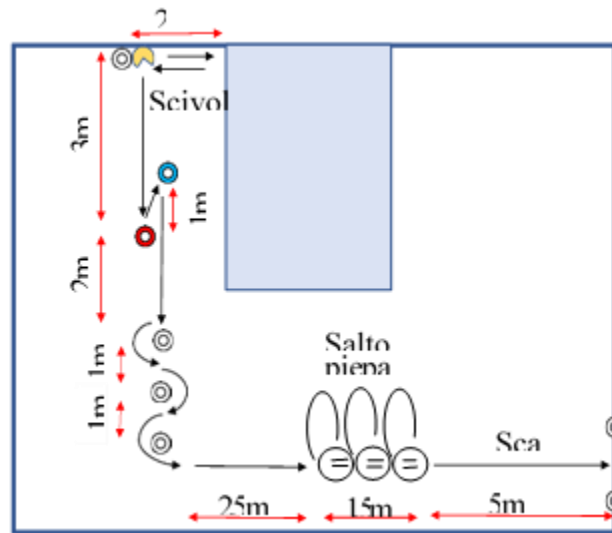


Figure 1

During transition period group B has no systematic and organized training, while group A performs 16 training sessions, twice a week for 1,5 hours, for a total of 24 hours. The typical content of each sessions were divided into two phases, 1. warm up and core stability, 2. Technical development.

**RESULTS**

Tests shows the following values:

Table 1. Anthropometric Data

	Group A (n=12)		Group B (n=12)	
	M	DS	M	DS
<b>Age</b>	15,34	0,75	19,13	0,58
<b>Height</b>	161	4,16	168	3,93
<b>Weight</b>	56,75	3,77	57,30	3,92
<b>BMI</b>	22,01	1,21	21,76	0,90

Table 2. Circuit Skills Test

GROUP A pre-test June		Group A post-test September		GROUP B pre-test June		Group B post-test September	
1	9,56	1	10,19	1	8,81	1	8,56
2	9,13	2	9,38	2	8,59	2	9,06
3	8,19	3	9,18	3	8,4	3	9,02
4	9,78	4	9,75	4	8,5	4	8,07
5	9,62	5	10,19	5	8,41	5	8,54
6	9,81	6	9,6	6	9,05	6	9,55
7	9,19	7	10,52	7	8,22	7	8,25
8	8,15	8	9,25	8	8,81	8	9,04
9	8,77	9	9,21	9	9,11	9	9,39

<b>10</b>	9,47	<b>10</b>	9,53	<b>10</b>	8,39	<b>10</b>	9,18
<b>11</b>	9,4	<b>11</b>	9,46	<b>11</b>	8,81	<b>11</b>	8,56
<b>12</b>	8,66	<b>12</b>	9,85	<b>12</b>	8,59	<b>12</b>	9,06

## DATA ANALYSIS AND DISCUSSION

The significant difference was set with  $p < 0.05$ . The data shows that there is a significant difference between the two groups in September ( $p=0.001$ ). For the group B (that not continue the training during the transition period) there is no a significant difference ( $p=0.075$ ); while for the group A (that continue the training during transition period) there is a significant difference ( $p= 0.004$ ).

Table 1. T-Test group B (initial-final)	
t-test	June - September
p-value	0.075 No significant
Level significant $p < 0.05$	

Table 2. T-Test group A (initial-final)	
t-test	June - September
p-value	0.004 Significant
Level significant $p < 0.05$	

Table 3. T-Test group A-B (final)	
t-test	September
p-value	0.001 Significant
Level significant $p < 0.05$	

## CONCLUSION

This study has collected data about test performance of female basketball athletes, divided into two groups (experimental and control), testing speed and coordination before and after the transition period, taking into account the different approach of each group this period. Data analysis shows that the active, systematic and organized approach during transition period have effect on the performance of the athlete when he/she starts new preparatory phase. These analyse and evaluate about the reduction or the improvement of the performance allow the coaches to monitor the training process, to design the training load for an effective variable performance, taking into account also the strategic role of the transition period and the importance of an adequate planning of this period (Altavilla et al., 2018a; Raiola 2012, 2014, 2016).

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