

# Specific periodization for the volleyball: a training organization

## Abstract

The specific periodization for the volleyball was elaborate with the influence of the traditional periodization of Matveev, with some contents of the structural scheme of high intensity loads of Tschiené, of the block periodization of Verkhoshanski, of the non-linear periodization elaborate by the Americans, of the periodization of selective loads of Gomes and of the tactical periodization of Vitor Frade. The objective of the review article was to explain how the volleyball coach organizes the ball training with the specific periodization for the volleyball. The volleyball player works a skill during the technical training with the objective of improve the biomechanics of the sports technique. During the game situation training the volleyball player practices two or more skill in the sequence defined of the volleyball match. Therefore, training load of the technical training and of the game situation training is in accordance with the skill prescribed during the volleyball training because the effort of each volleyball skill with the result of the heart rate in beats per minute determined the skills with more and less effort. The game training the control of the skills effort is difficult of measure before of the training. The specific periodization for the volleyball has the characteristics of elaborates the volleyball skills of the technical training and of the game situation training according with the objective of the training and with the volleyball skill effort. In conclusion, specific periodization for the volleyball has the objective of improve the athlete performance with a subjective control during the training.

**Keywords:** volleyball, training, effort, periodization, sports

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## Introduction

The sports periodization started during the Olympic Games of the Antiquity with the Greek athletes.<sup>1</sup> Soviet Union had attention about the periodization after the Russian Revolution of 1917.<sup>2,3</sup> and this country practiced several studies about periodization with the objective of improve this training content.<sup>4</sup> However, the periodization for the type of sport needs to be in agreement with the characteristics of the sport.<sup>5</sup> Then, Marques Junior<sup>6</sup> elaborated the specific periodization for the volleyball with purpose of organizes the volleyball training. The specific periodization for the volleyball is new because this model was elaborated in 2011 (had 8 years, 2011 to 2018) by the Brazilian Marques Junior<sup>6</sup> who played indoor volleyball and beach volleyball in Rio de Janeiro, Brazil. This periodization model has the content for improve the volleyball training with an organization of the volleyball skills during the technical training and the game situation training.<sup>7</sup> Others types of training of the specific periodization for the volleyball are the game training and the physical training. The training load and the fatigue were monitored with subjective perception scale during the use this periodization.<sup>8</sup> The specific periodization for the volleyball was elaborate with the influence of the traditional periodization of Matveev,<sup>9</sup> with some contents of the structural scheme of high intensity loads of Tschiené,<sup>10</sup> of the block periodization of Verkhoshanski,<sup>11</sup> of the non-linear periodization elaborate by the Americans,<sup>12</sup> of the periodization of selective loads of Gomes<sup>13</sup> and of the tactical periodization of Vitor Frade.<sup>14</sup> The author of the specific periodization for the volleyball used some contents these periodization models because the volleyball literature determined high performance with these types of periodization of the volleyball player.<sup>15-18</sup> The

figure 1 illustrates the content used of others models in the specific periodization for the volleyball.

Then, a review about the specific periodization for the volleyball for the volleyball is important because this model has only three studies with language in Portuguese.<sup>6-8</sup> Therefore, a review in English is important for this periodization has more volleyball coaches using this model. The objective of the review article was to explain how the volleyball coach organizes the ball training with the specific periodization for the volleyball.

## Training structure with the specific periodization for the volleyball during the ball training

The volleyball match has a sequence of skills defined during the game.<sup>19</sup> The serve starts the match or the volleyball player has the objective of practice a point.<sup>20</sup> Reception and set has the action of construction and offensive development.<sup>21</sup> The attack is the skill most decisive skill in the volleyball victory because this skill causes more points.<sup>22</sup> The block is an important skill because practices a point or avoid the point.<sup>23</sup> The defense has the objective of avoid the point and starts the counterattack.<sup>24</sup> The Figure 1 illustrates the defined sequence of the skills during the volleyball match.

The volleyball player works a skill during the technical training with the objective of improve the biomechanics of the sports technique.<sup>25</sup> But during the game situation training the volleyball player practices two or more skill in the sequence defined of the volleyball match (Figure 2). Then, Arruda and Hespanhol<sup>26</sup> determined that the greatest efforts in the volleyball are the jump skills and after the defensive

displacements. Therefore, training load of the technical training and of the game situation training is in accordance with the skill prescribed during the volleyball training.<sup>27</sup> For example, tactical training and attack had highest subjective perception of effort of  $6 \pm 1,6$  (medium effort) of the Foster scale, in second place of the subjective perception of effort was the tactical training with  $5,9 \pm 2$  (medium effort), in third place was the block training with  $5,8 \pm 2$  (medium effort) and others.<sup>28</sup> Tactical training occurs during the game and is with more effort. Attack and block the volleyball player needs of high jump and the athlete practices with high effort. Marques Junior<sup>8</sup> determined the effort of each volleyball skill with the result of the heart rate in beats per minute (bpm). The Figure 3 illustrates the values.

Then, the game situation training of overhand serve and reception has a less effort than the technical training of attack. Therefore, the skill effort is important for the coach determines the training load

subjectively before of the athlete practices the training.<sup>7</sup> For example, a training structure of a day the Figure 4 illustrates. After the training, the volleyball coach shows for the volleyball player the faces scale of the subjective perception of effort adapted of Foster for determine the intensity<sup>29</sup> and the faces scale of the subjective perception of the muscle soreness of the physical effort of the volleyball for determine the fatigue.<sup>30,31</sup> The Figure 5A, Figure 5B illustrates two scales. The use of the faces scale of the subjective perception of effort adapted of Foster is important for the coach calculates the training load, the monotony of loads and strain loads recommended by Foster et al.<sup>32</sup> Marques Junior<sup>8</sup> explained in details these calculations, but the reader needs to consult this article. The specific periodization for the volleyball has a limitations, the author practiced little research about this model,<sup>33</sup> but actually is the only periodization model elaborate for the volleyball. The article is finished with the schematic drawing that represents the specific periodization for the volleyball.

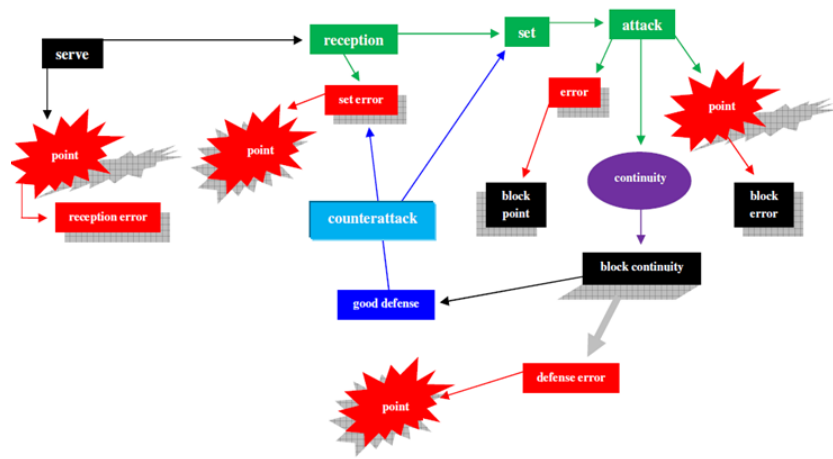


Figure 1 Volleyball skills during the volleyball match.

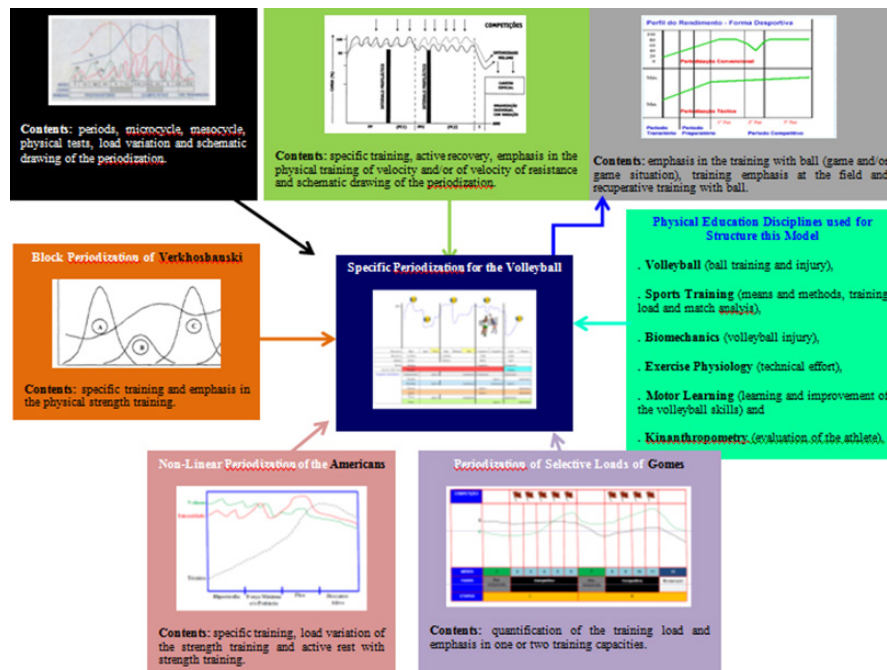


Figure 2 Contents of other models of periodization that Marques Junior<sup>7,8</sup> used for the elaboration of the specific periodization for the volleyball.

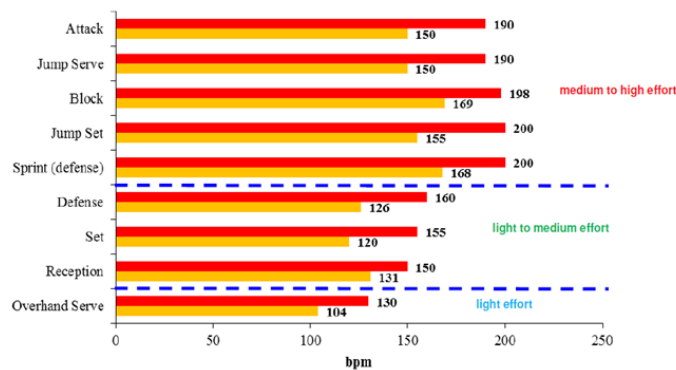


Figure 3 Heart rate of the volleyball skill (minimum value in orange and maximum in red).

Training Period	Mesocycle 1	Medium to High Microcycle
<b>Monday and Type of Training</b>	<b>Objective</b>	<b>Time Effort</b>
1) Serve and Reception (game situation training)	Improve the skills.	30 minutes light to medium
2) Attack (technical training)	Improve the attack strength.	30 min medium to high
3) Block (technical training)	Improve the coordination of the block.	30 min medium to high
4) Overhand Serve (technical training)	Active rest after several jumps of the attack and of the block.	10 min light
5) Attack and Block (game situation training)	Improve the skills.	20 min medium to high
		<b>Total 120 min or 2 h</b>

Attention!!! High physical stress in the athlete

Active Rest with overhand serve.

Figure 4 Training structure of the specific periodization for the volleyball.

Descritores	Classificação
Repouso	0
Leve	1 2 3
Médio	4 5 6 7
Forte	8 9 10

Figure 5A Faces Scale of the subjective perception of effort adapted of Foster

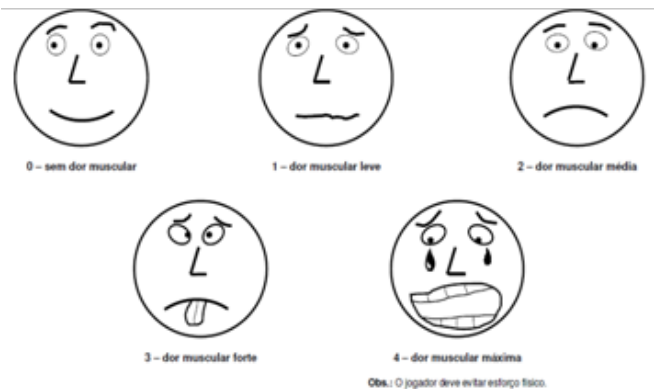


Figure 5B Faces scale of the subjective perception of the muscle soreness of the physical effort of the volleyball.

### Conclusion

The specific periodization for the volleyball has the characteristics of elaborates the volleyball skills of the technical training and of the game situation training according with the objective of the training and with the volleyball skill effort. But the game training the control of the skills effort is difficult of measure before of the training. Therefore, this periodization model has the objective of training structure with a subjective control of the volleyball skill effort. In conclusion, specific periodization for the volleyball has the objective of improve the athlete performance with a subjective control during the training.

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## Conflict of interests

Author declares that there is no conflict of interest.

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