

Peripheral vision training for the soccer: 10 years of the studies

Abstract

When the soccer player practices during the match the skills with emphasis on peripheral vision is important for he has a good vision of the players with the objective of the player practices a better action of the skill. The objective of the review was of present the peripheral vision training structure. The peripheral vision training the coach can prescribe during the technical training, the game situational training and the game training, but the ideal for each type of training the use of the motor learning practices. Therefore, the coach guides the athlete in all exercises when practicing the skill with the peripheral vision training through of the head up. After 15 sessions of indoor soccer, the offensive quality was detected in the peripheral vision training group (PG) and of the traditional training (TG). Two-way ANOVA detected a statistical difference ($p \leq 0,05$) between the PG versus the TG. The PG was better during the start of the attack and development of the attack than the TG. But the TG was better during the finalization of the attack (FA) of the 1st shift and the PG was better during the FA of the 2nd shift. The indoor soccer with less offensive actions causes more goals during the match. The PG practiced less action during the attack (2 to 4 actions of attack) and the TG practiced more actions during the attack (2 to 6 actions of attack). In conclusion, peripheral vision training is very important for the performance of the soccer player.

Keywords: vision, training, learning, athletic performance

Volume 2 Issue 5 - 2018

Nelson Kautzner Marques Junior^{1,2}

¹Department of Science of the Human Motricity, Brazil

²Member, Scientific Committee of the Revista Observatorio del Deporte, Chile

Correspondence: Nelson Kautzner Marques Junior, Department of Science of the Human Motricity, Brazil, Email kautzner123456789@gmail.com

Received: August 02, 2018 | **Published:** September 14, 2018

Introduction

The soccer training with the ball for the player practices the game with the emphasis on peripheral vision started in the Brazil 1950's.¹ This training after began to be exercised in others types of soccer, for example, the beach soccer, the indoor soccer.² When the soccer player practices during the match the skills (kick, pass, run with a ball and others techniques) with emphasis on peripheral vision is important for he has a good vision of the field and of the players with the objective of the player practices a better action of the skill^{3,4}. Therefore, the soccer players during the match with emphasis on peripheral vision need to play of head up because this action is important for a good soccer technique.^{5,6}

However, soccer literature has no study about this training with emphasis on peripheral vision until 2007.⁷⁻⁹ Then, the soccer coach has problem for structure and prescribe the training for the soccer player with the emphasis on peripheral vision because the soccer literature does not provide the information. In 1999, Pinto and Araújo¹⁰ denominated the head up training of peripheral vision training. Then, in 2008 occurred the first study about the peripheral vision training in the master's thesis of Marques.¹¹ This master's thesis generated several types of research about this theme¹²⁻¹⁴. The study of the master's thesis about the peripheral vision training was during the indoor soccer match. Therefore, this master's thesis was important for the soccer coaches and for others types of soccer. The objective of the review was of present the peripheral vision training structure.

Peripheral vision training structure and the benefit for the performance

The researcher studied peripheral vision training during your master's thesis.¹¹ But the author of the article had the first contact with the head up training during 1981 and 1982 when the author was

a young indoor soccer player. The author lived in Barra da Tijuca, a place of the Rio de Janeiro (in Brazil), with former indoor soccer players who taught young people how to practice the indoor soccer of head up. The author practiced the head up training from 1981 to 1985. Then, the author of the article started the indoor soccer of goalkeeper and after he played of a winger and/or forward. Figure 1 illustrates the author when he was goalkeeper during a championship.



Figure 1 The author of the study in 1982 during a championship.

How the coach deserves structure the peripheral vision training? The soccer coach Baroninho is responsible by the Varginha Esporte Clube, a soccer team of the 2nd division of the Mineiro Championship, state of Brazil. The soccer players need to be dressed in the same clothes and in the head, the players wear a swimming cap. The team A wears a blue swimming cap and the B black. The objective of the swimming cap is to force the player practices head up when he practices a pass because the player identifies your team's athlete through of the cap with the same color. Figure 2 illustrates the peripheral vision training with the swimming

cap. However, the use of the swimming cap interferes with the heat loss and it is more indicated the use of a band on the forehead.¹⁵ The peripheral vision training the coach can prescribe during the technical training, the game situational training and the game training, but the ideal for each type of training the use of the motor learning practices.¹⁶ The most appropriate motor learning practices for the peripheral vision training are the blocked practice, the random practice and the mixed practice, composed of blocked and random practice.¹⁷ Type of training has a better motor learning practice to be applied and table 1 shows this.¹

Table 1 Type of training and of practice for the peripheral vision training

Training	Practice
Technical	Blocked
Game situation	Random
Game	Mixed (blocked and random)



Figure 2 (A) Peripheral vision training with the swimming cap. (B) Varginha Esporte Clube shield.

Therefore, the coach guides the athlete in all exercises when practicing the skill with the peripheral vision training through of the head up. Figure 3 illustrates the emphasis on the type of training on vision. Marques¹⁸ determined empirically the predominant vision with the type of soccer skill when the player practices the peripheral vision training and the table 2 shows this. The studies about peripheral vision training determined a performance increase of young indoor soccer players. Marques¹¹ detected the offensive quality after 9 sessions and

after more 6 sessions (total of 15 sessions) of the peripheral vision training group (PG, n = 4) and of the traditional training (TG, n = 4) that practiced the skill with emphasis on central vision (head low). After each session occurred a championship, the 1st shift, and the 2nd shift. The indoor soccer championship was filmed and after the researcher practiced match analysis with a scout.

Table 2 Type of vision of the player in each skill during the peripheral vision training

Skill	Peripheral Vision (PV)	Central Vision (CV)	PV and CV
Run with a ball	X		
Pass	X		
Control ball	X		
Kick	X		
Defensive activity (disarm and marking)		X	
Dribble			X
Feint			X



Figure 3 (A) Indoor soccer player with the emphasis on peripheral vision during the match. (B) The player practicing the pass with the central vision.

Two-way ANOVA detected a statistical difference ($p \leq 0.05$) between the PG versus the TG during the start of the attack (SA), the development of the attack (DA) and the finalization of the attack (FA). The PG was better during the SA and DA than the TG. But the TG was better during the FA of the 1st shift and the PG was better during the FA of the 2nd shift. Figure 4 illustrates the result. The indoor soccer with less offensive actions causes more goals during the match.¹⁶ Marques¹⁹ detected after of 15 sessions of the peripheral vision training the PG practiced less action during the attack and the TG practiced more actions during the attack. Figure 5 illustrates the result. However, the studies about the peripheral vision training had a limitation because the researcher did not use the Vision in Action System (VIA System) of Vickers²⁰ or the Eye Tracking System (ET System).²¹ The VIA System and the ET System are used to collect ocular images of the peripheral and central vision during the match.

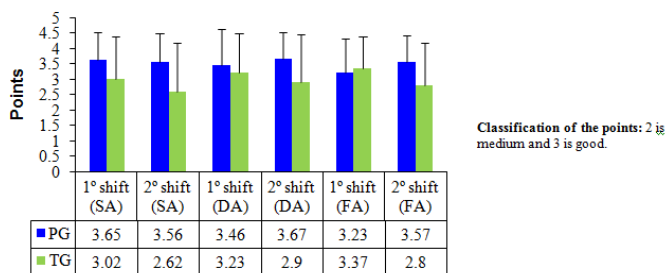


Figure 4 Quality of the offensive phases.

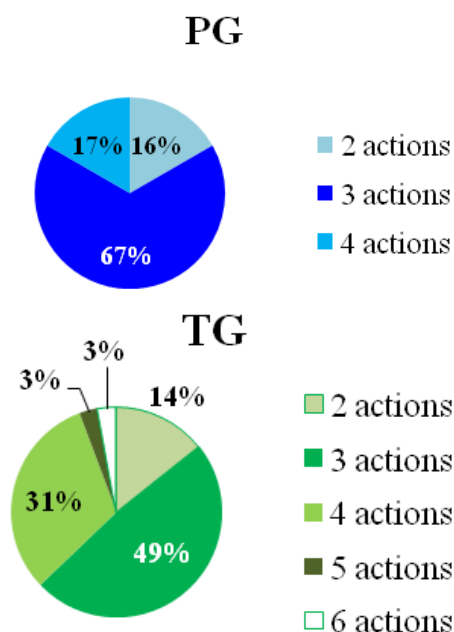


Figure 5 Percentage of the number of actions during the attack.

Conclusion

Peripheral vision training is important for all the types of soccer (beach, indoor and others) because the player had a better vision of the field and of the athletes during the match. Then head up is important because the player has more probability of practice a good soccer skill (pass, kick, run with a ball, control ball and others). However, this training needs more studies because the author had an unsophisticated technology. In conclusion, peripheral vision training is very important for the performance of the soccer player.

Acknowledgments

The author thanks the MOJ Sports Medicine invitation to write an article.

Conflict of interests

Author declares that there is no conflict of interest.

References

1. Marques N. Coaching peripheral vision training for soccer athletes. *Phys Educ.* 2010;67(2):74–89.
2. Marques N. Conteúdo básico para estruturar o treino da visão periférica no futebol de salão. *Mov Percep.* 2008;9(13):161–190.
3. Marques N. O efeito do treino da visão periférica no ataque de iniciados do futsal: um estudo na competição. *Rev Bras Cine antropom Desempenho Hum.* 2009;11(1):119.
4. Marques N. O efeito do treino da visão periférica no ataque de iniciados do futsal: um estudo na competição. *Rev Bras Futebol* 2010;3(1):60.
5. Navarro A, Almeida R. *Futsal.* São Paulo: Phorte; 2008.
6. Marques N. Estudo sobre a visão no esporte: o caso do futebol e do futsal. *Rev Educ Fis.* 2009;(144):45–55.
7. Williams M, Hodges N. Practice, instruction and skill acquisition in soccer: challenging tradition. *J Sports Sci* 2005;23(6):637–650.
8. Van Der Kamp J. A field simulation study of the effectiveness of penalty kick strategies in soccer: late alterations of kick direction increase errors and reduce accuracy. *J Sports Sci.* 2006;24(5):467–477.
9. Bloomfield J, Polman R, O'Donoghue P. Physical demands of different positions in FA Premier League soccer. *J Sports Sci Med.* 2007;6(1):63–70.
10. Pinto J, Araújo N. A importância do treinamento da visão periférica no futebol. *Rev Min Educ Fis.* 1999;7(2):81–93.
11. Marques N. *O efeito do treino da visão periférica no ataque de iniciados do futsal: um estudo na competição.* Rio de Janeiro: UCB; 2008.
12. Marques N. Enseñanza del entrenamiento de la visión periférica para jugadores de fútbol sala. *Futbol Táctico.* 2009;(32):133–152.
13. Marques N, Garcia G, Silva V. O efeito do treino da visão periférica na correlação entre chutes para o gol e tentos realizados no futsal. *Rev Conexões.* 2008;6(2):13–27.
14. Marques N, Silva V. O efeito do treino da visão periférica na zona dos gols do futsal. *Rev Educ Fis.* 2008;(143):18–27.
15. Marques N. Altas temperaturas. *Mov Percep.* 2008;9(12):6–17.
16. Marques N, Nunes W, Tubino M, et al. O efeito do treino da visão periférica no ataque de iniciados do futsal: uma análise sobre os estudos de uma dissertação. *Lecturas: Educ Fis Dep.* 2012;157(171):1–27.
17. Marques N. Ensino do treino da visão periférica para jogadores do futsal. *Refeld.* 2009;4(1):34–52.
18. Marques N. Treino da visão periférica para o futebol e seus derivados. *Rio de Janeiro.* UCB; 2009.
19. Marques N. The effect of the peripheral vision training of the quantity of actions during the attack of the indoor soccer. *Braz J Biomotr.* 2009;3(1):40–55.
20. Vickers J. Visual control when aiming at a far target. *J Exper Psychol.* 1996;22(2):342–354.
21. Reina R, Moreno F, Sanz D. Visual behavior and motor responses of novice and experienced wheelchair tennis players relative to the service return. *Adapt Phys Activ Q.* 2007;24(3):254–271.