

**STUDY REGARDING THE WAY IN WHICH THE BACAU
COACHES PERCEIVE THE ROLE OF THE PHYSICIAN
DURING THE TRAINING AND COMPETITION PROCESS**

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Abstract: *The key role in sports training is played by the coach, but his/her activity in creating and producing the top athletic performance can be improved if joined by the efforts of the team physician. In order to know the physician's role during the sports training, we conducted an inquiry-based observational study on 18 athletes and 18 coaches of Bacau County. The answers, presented in tables, were analyzed and interpreted, emphasizing the coaches' tendency not to work as a team, but also a lack of team physicians.*

Introduction

High athletic performance represents the result of an activity that envisages the approach of bio-motor and mental factors during the training process. The key role in sports training is played by the coach, but his/her activity in creating and producing the top athletic performance can be improved if joined by the efforts of the team physician. In order to ensure a continuous development of the training ability and to obtain high athletic performances, we need to "prevent the injuries and find ways of rehabilitation," an aspect that can be achieved much more effectively through the participation of a team physician. In training, "the most important aspect is the integrity of the musculoskeletal system, and thus, the static-kinetic function" (C.Ivan, 2008:3), and for this, the functionality of the athlete's body must be ensured and monitored by a physician. The limitation of the training capacity in athletes is often the consequence of pains appearing in muscles, bones, and tendons. The main reason for passing pains is due to a demand on and development of the muscles, to an increase in the vertical pressure on the vertebrae and joints. The training directed towards an (excessive) development of strength, speed, endurance, has been proven to be responsible of the

appearance of certain pains in the spine. This diminishes the effectiveness of the physical activity and "raises the possibility of pain and risk of injury caused by fatigue" (C.Ivan, 2008:4), a fact that needs a permanent medical supervision. In trying to obtain better results, today, in professional sports there are more and more talks about increasing the intensity of physical effort during training. The questions that are being asked are: "how far can we go, how much can we adapt the human body to such efforts, if these efforts can have negative repercussions on the athlete, and whether these repercussions can be foreseen or at least diminished" (P.Drosescu, E. Carasevi 2010:1). The coach cannot answer these questions, and many others that can be asked throughout the course of the training, without a team physician.

Today, the physician should be a part of the teams training the professional athletes since an early age. In Romania (found only in the representative teams, and not even there in sufficient number), a physician must supervise and coordinate a large number of athletes. The physician has to treat the different muscle, articular, and ligament injuries, besides the permanent prophylaxis (s)he must undertake. By touching the physiology and methodology of sports training, sports medicine is an "objective, scientific support for every great athletic performances, by maintaining the athletes' physical and mental wellbeing" (G.Panait, 2005).

Material, method

In conducting this study we started from the following *hypotheses*: throughout the entire athletic activity, be it during training, or during competitions, the team physician is always present; the coaches and the athletes think that the physician is the main person wanted for the training team. The *research methods* we used were: the study of the specialized literature, the inquiry, the statistical-mathematical method, and the graphical representation. The 36 *subjects* were divided in two groups: one group of *coaches (Group 1)*, comprising 18 subjects, over 36 years of age; one group of *athletes (G2)*, comprising 18 subjects, over 16 years of age, with a professional athletic experience of at least 4 years. The research was conducted in multiple locations in Bacau county (Onesti, Tg. Ocna, Bacău). The inquiry was based on a questionnaire (with 4 items). The questionnaire tried to encapsulate the

way in which the team physician's role in the training process is perceived by the coaches and athletes.

The results of the inquiry conducted on coaches and athletes regarding the role and necessity of a sports physician

The answers recorded by the Group 1 (coaches) and Group 2 (athletes) allowed us to observe some interesting opinions, some being very similar, some very different.

At question 1 *"What were the reasons that made you call upon the services of a team physician?"* (with 4 answer choices), the answers have shown that 10 coaches (55.55%) needed the physician to get the periodical medical examination (Table 1). The answer "injuries" is the second choice, with 33.33%, while the answers "Advice with regards to medication for a sustained effort" and "Information on the biochemical and physiological modifications during effort" were chosen by 5.56% of the coaches.

Table 1 Results Question 1.

<i>Question 1. "What were the reasons that made you call upon the services of a team physician?"</i>	<i>Group 1 Coaches</i>		<i>Group 2 Athletes</i>	
	<i>No. of answers</i>	<i>Percent</i>	<i>No. of answers</i>	<i>Percent</i>
Injuries	6	33.33%	9	50.00%
Medical examination	10	55.55%	3	16.67%
Advice with regards to medication for a sustained effort	1	5.56%	6	33.33%
Information on the biochemical and physiological modifications during effort	1	5.56%	0	
Total	18		18	

As we can see, the athletes' answers were different from the coaches'. 50% of the athletes go to the physician in case of an injury, 33.33% for advice regarding medication, and 16.67% for the periodical medical examination. None of the athletes go to the doctor to find out information about the biochemical and physiological modifications during effort.

After comparing the coaches' and the athletes' answers, we could see that the coaches go to the physician mainly for the mandatory examination (55.55%), and the athletes in the case of an injury (50%), but also that the biochemical and physiological information regarding the physical effort are not part of the athletes' life, and the coaches have little knowledge of it. This aspect can be considered to be negative for the athletic results, because there are no training programs being based on the knowledge regarding the athlete's physiological progress.

Question number 2, "*Do you think that the team physician should have an active or a passive role in the coach's work?*" shows the fact that both the coaches and the athletes (36 subjects) said "YES", which indicates that they think it is necessary to collaborate with the team physician. But the proportion of the coaches who accept the physician's involvement in rehabilitation and recovery is 22.22%, in the diet, of 44.44%, and in the elaboration of the training program, of 11.11%. The athletes' opinion is different, showing that 66.66% of them think that there is a need for an active involvement of the physician in the rehabilitation and recovery programs, 61.12%, in the diet, and only 5.55% in the elaboration of the training program.

When comparing the opinions, we can see that 77.77% of the coaches think the physicians have a **passive role** concerning the rehabilitation and recovery, 55.56%, concerning the diet, 88.89% in the elaboration of the training program, while the athletes present smaller percentages regarding the passiveness of the physicians in the three directions: 33.34%, 8.88%, and 94.45%, respectively. The results emphasize the coaches' tendency not to involve the physician in the rehabilitation, recovery, diet, and elaboration of the program, but they show also the athletes' opinion regarding the active role of the physician in the rehabilitation process, and his/her passive role in the elaboration of the programs.

Table 2. The results regarding the coaches' and the athletes' perception of the physician's role

Question 2. Do you think that the team physician should have an active or a	Group 1 Coaches		Group 2 Athletes	
	No. of	Percent	No. of	Percent

<i>passive role in the coach's work?</i>	answers		answers	
Active role, being involved in rehabilitation, recovery	4	22.22	12	66.66
Passive role, being involved in rehabilitation, recovery	14	77.78	6	33.34
Active role, being involved in the athletes' diet	8	44.44	11	61.12
Passive role, being involved in the athletes' diet	10	55.56	7	38.88
Active role, being involved in the athletes' training program	2	11.11	1	5.55
Passive role, being involved in the athletes' training program	16	88.89	17	94.45
Total	18		18	

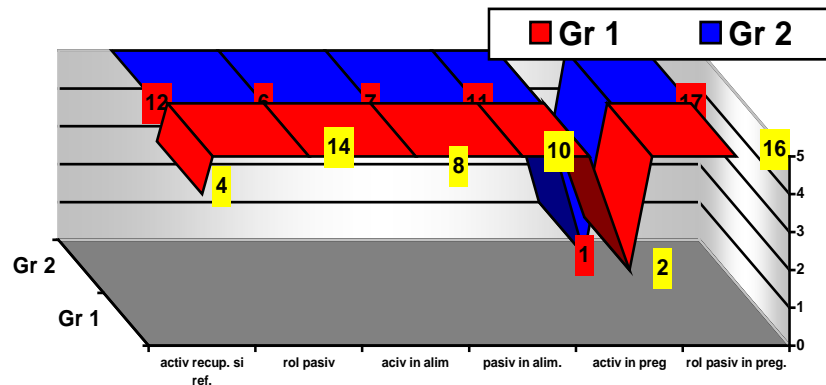


Figure 1 - Comparative responses of the G1 and G2 subjects 2 for the question regarding the physician's involvement

For the Question number 3, "Taking into account your experience, and your level of performance, which one of the following specialists would you need more in your training?", the subjects had six choices: sports physician, nutritionist, psychologist/psychotherapist, physical therapist, masseur, and biochemist. 22.22% of the coaches think that a psychologist is necessary, 11.11% a nutritionist, 16.67% a physical therapist, 27.78% a sports physician, 22.22% a masseur, and 0% a biochemist. 33.33% of the athletes think that a psychologist is necessary,

5.56% a nutritionist, 5.56% a physical therapist, 38.88% a sports physician, and 5.55% a masseur (Table 3). Ranked amongst the top choices of the coaches and athletes, are the sports physician (27.78%, and 38.88%, respectively), and the psychologist/psychotherapist (22.22%, and 33.33%, respectively). Neither the coaches, nor the athletes consider the presence of a biochemist in the training process unnecessary, an aspect which we consider to be wrong and inadequate.

Table 3 The Question 3 results, regarding the need for the training group to be formed of multiple specialists

Specialists wanted by coaches and athletes	Group 1 Coaches		Group 2 Athletes		Fig. 2 Results for Question 3
	No. of answ	Percent	No. of answ	Percent	
psychologist, psychotherapist	4	22.22	6	33.33	
nutritionist	2	11.11	1	5.56	
physical therapist	3	16.67	1	5.56	
sports physician	5	27.78	7	38.89	
masseur	4	22.22	1	5.56	
biochemist	0	0	0	0	
Total	18		18		

Regarding Question number 4, "Throughout your professional activity, did you get medical assistance during the training process and during competitions?", the subjects had a number of opinions (Table 4 , Figure 3).

From the answers that were recorded, both from the coaches, and the athletes, we can observe that only one subject (5.55%) from each group declared that he has benefited from medical assistance during competitions. None of the coaches or the athletes has declared that they got any medical assistance during training.

The highest value was recorded for the medical assistance during competitions, for which both the athletes and the coaches recorded a score of 44.44%.

Table 4 The results regarding the medical assistance during training and competitions

Medical assistance	Group 1 Coaches		Group 2 Athletes		Fig. 3 Results for Question 4
	No. answ.	Percent	No. answ.	Percent	
Always during training	-	0%	-	0%	
Always during competitions	1	5.55%	1	5.55%	
Sometimes during training	1	5.55%	1	5.55%	
Sometimes during competitions	3	16.67%	3	16.67%	
Only in training camps	3	16.67%	3	16.67%	
Sometimes during more important competitions	8	44.44%	8	44.44%	
Did not have any	2	11.12%	2	11.12%	
Total	18		18		

We must say that the professional athletes and coaches cannot get a specialized medical assistance because there are very few physicians that are specialized in sports medicine, in Bacau County. *We must emphasize also the fact that the number of jobs for the sports medicine specialization is very small, because of a very low demand.*

From the answers we collected after applying the questionnaire, we could form a general opinion regarding the aspects we tried to study.

Conclusions

The conclusions drawn from the inquiry emphasize the following aspects:

1. from the answers recorded in Question number 1, we could see that the coaches go to the physician mainly for the mandatory examination (55.55%), and the athletes in the case of an injury (50%), but also that the biochemical and physiological information regarding the physical effort are not part of the athletes' life, and the coaches have little knowledge of it;
2. the answers recorded for Question number 2 show that 77.77% of the coaches think the physicians do not have an

active role concerning the rehabilitation and recovery, 55.56%, concerning the diet, 88.89% in the elaboration of the training program, while the athletes present smaller percentages regarding the passiveness of the physicians in the three directions: 33.34%, 8.88%, and 94.45%.

3. the answers recorded for Question number 3 show that the athletes and the coaches need, in various proportions *a sports physician, a nutritionist, a psychologist/psychotherapist, physical therapist, a masseur, and a biochemist*. 22.22% of the coaches think that a psychologist is necessary, 11.11% a nutritionist, 16.67% a physical therapist, 27.78% a sports physician, 22.22% a masseur, and 0% a biochemist, while 33.33% of the athletes think that a psychologist is necessary, 5.56% a nutritionist, and a physical therapist, 38.88% a sports physician, and 5.55% a masseur;
4. *both the athletes and the coaches have benefited from medical assistance during the training process in proportion of 5.55%, and during competitions, in proportion of 44.44%*, which shows that a permanent medical assistance is not ensured;
5. the hypothesis stating that throughout the entire athletic activity, be it during training, or during competitions, the team physician is always present, was not confirmed;
6. the hypothesis stating that the coaches and the athletes think the physician to be the main person wanted for the training team, was confirmed, both for coaches and athletes.

References

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Titlu: Studiu privind modul în care percep antrenorii din Bacău rolul medicului în procesul de pregătire și cel competițional.

Cuvinte cheie: medic, rol, pregătire, competiție, antrenori.

Rezumat: Rolul major în antrenamentul sportiv revine antrenorului, dar activitatea acestuia în crearea și producerea performanței sportive poate fi îmbunătățită dacă i se alătură și medicul sportiv. Pentru cunoașterea rolului medicului în antrenamentul sportiv am realizat un studiu constativ pe 18 sportivi și 18 antrenori din județul Bacău, având la bază ancheta. Reăspunsurile cuprinse în tabele au fost analizate și interpretate ele au scos în evidență tendința antrenorilor de a nu lucra în echipă dar și lipsa medicilor sportivi.

Titre: Étude sur la façon de percevoir le rôle des entraîneurs dans la préparation de Bacau médicale et compétitives.

Mots-clés: médecin, le rôle, la formation, la concurrence, les entraîneurs.

Résumé: Le rôle majeur dans la formation sportive est l'entraîneur, mais son travail dans la création et la production de la performance sportive peut être améliorée si le médecin est rejoint par le sport. Pour connaître le rôle du médecin dans l'entraînement sportif, nous avons mené une étude déterminer les 18 athlètes et 18 entraîneurs dans le comté de Bacau, basé sur l'investigation. Reăspunsurile conținute în tabele au fost analizate și interpretate les entraîneurs ont révélé tendance à ne pas travailler dans un sport d'équipe et pas de médecins.