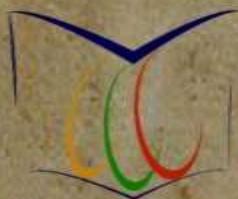


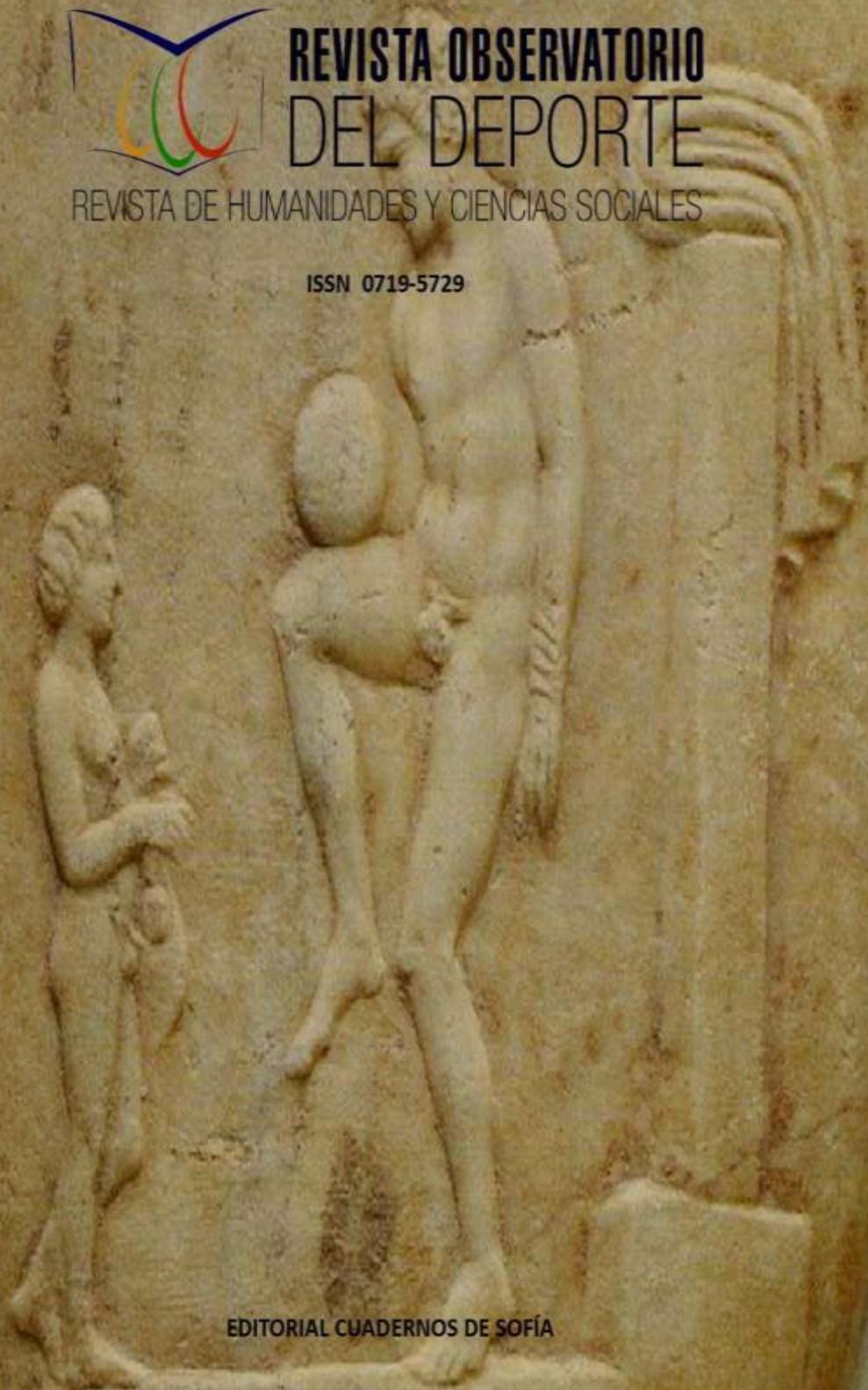
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**STRESS FACTORS AND THEIR INFLUENCE ON SPORTS PERFORMANCE
OF THE NATIONAL FEMALE BASKETBALL TEAM**

**FACTORES DE ESTRÉS Y SU INFLUENCIA EN EL RENDIMIENTO DEPORTIVO
DEL EQUIPO NACIONAL DE BALONCESTO FEMENINO**

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Abstract

The increased requirements to the efficiency of sports activities and the dynamics of basketball game call for a high resistance in stress situations. Knowing the differences in the manifestation of stress among elite female basketball players could help the easier and more effective coping with the reactions it provokes.

Keywords

Basketball – Female national team – Stress factors – Sports performance

Resumen

Los mayores requisitos para la eficiencia de las actividades deportivas y la dinámica del juego de baloncesto exigen una alta resistencia en situaciones de estrés. Conocer las diferencias en la manifestación de estrés entre las jugadoras de baloncesto de élite podría ayudar a enfrentar las reacciones que provoca, de manera más fácil y efectiva.

Palabras Claves

Baloncesto – Selección femenina – Factores de estrés – Rendimiento deportivo

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Introducción

The term 'stress' has a certain meaning that is derived from the Latin stringere (tighten) and is used in English to describe human's experiences and behaviour.

In the contemporary science, the term 'stress' has obtained a wider meaning and is used as a synonym of power, pressure, tension. The inventor of the theory, H. Sellier, defined it "as an unspecific response of the body to any requirement it faces"¹. He divided the time development of stress into three major stages:

- alarm stage (alarming reaction);
- resistance stage (resistance);
- exhaustion stage.

The prevailing opinion that stress is a physiological phenomenon, appearing because of a powerful, unusual or continual irritation, which requires a total mobilization of adaptation mechanisms. Its role is not only to protect an individual from the influence of the stressor, but also to build a system for its efficient overcoming in future, i.e. to develop the so-called pre-emptive reactions to outer stimuli².

The peculiarities of modern sport are closely related to Sellier's theory of stress, stress factors, and stress situations revealing the contradictory nature of the interaction between a person and the objective conditions of a sports activity. One has to find such ways of influence that help the prompt recovery of the balance between the environment and the athlete.

Other irritants can also be stressors if they call for increased requirements to the adaptation process³. A stressor is an alarming factor which takes the organism out of the 'frames' peculiar for its physiological constants. They lead to a disruption in the dynamic balance of the regulatory systems⁴. Also called the irritator which provokes the triggering of a stress reaction a stressor. But, they believed it turned into such according to how powerful the cognitive interpretation was, i.e. according to how important one considers it to be⁵.

Some authors point out that the importance of an event, the aim of a competition, and the expectation for a starting signal are believed to be main stress provoking factors⁶. Others think that the major factor is the degree of incongruence between an athlete's momentary condition and the expected one⁷.

¹ Х. Селие, Стрес без дистрес. Наука и искусство. С. 1992.

² П. Анохим, Очерки физиологии функциональных систем. Медицина. М. 1975.

³ А. Виру, Гормональные механизмы адаптации и тренировки. Наука. М. 1981.

⁴ С. А. Разумов, Физиология эмоционально-стрессовых состояний и работоспособность спортсмена. Лекция, Л., 1986.

⁵ Дж. Эверли and Р. Розенфелд. Сресс: природа и лечение. Медицина. М. 1985.

⁶ С. Parfit; J. Jons and L. Hardy, Multidimensional Anxiety and Performance. In: Stress and Performance in Sport (edited by J.G. Jones and L. Hardy), John Wiley, Chichester. 1990.

⁷ J. Kerr, Stress and Sport: Reversal Theory. In: Stress and Performance in Sport (edited by J.G. Jones and L. Hardy), John Wiley, Chichester, 1990.

Modern basketball sets high requirements to athletes and coaches' physical, psychic, technical and tactical abilities. A major factor for victory is the multi-sided quality preparation of basketball players conducted by their coaches. The interrelation between coaches and athletes is determined by their personal qualities, the team play, and the coaches' work.

Stress is an extremely complicated phenomenon combining all kinds of reactions a person could experience, refracted through the prism of one's Self in the interaction with environment⁸. Nowadays stress is a very topical issue. It leads to the question – should we try to avoid it, or we should use it in order to increase sports efficiency?

The aim of the present study is to help the design of individual and team strategies for overcoming stress in competition among female basketball players.

Research methods

The research was carried out in November 2018.

In order to fulfill the aim of the research we set the following tasks:

- Studying the relevant literature;
- Determining the leadership style of the coach of the national female basketball team and its influence on the athletes;
- Surveying the factors causing stress in a basketball competition.

Subject of the research is the influence and specifics of stress in basketball

The research was done among 14 female basketball players from the National Team of Bulgaria, who took part in the qualifications for the Basketball European Championship. In order to examine the manifestations of stress more profoundly, we handed out a special questionnaire to the national female competitors⁹. The questionnaire includes:

- Personal data, which will serve for a better interpretation of the collected data.
- Question related to the coach's leadership style.
- Specific questionnaire including the factors which provoke stress, stress reactions, the influence of coach's stress and the techniques used for reducing and/or overcoming this condition.

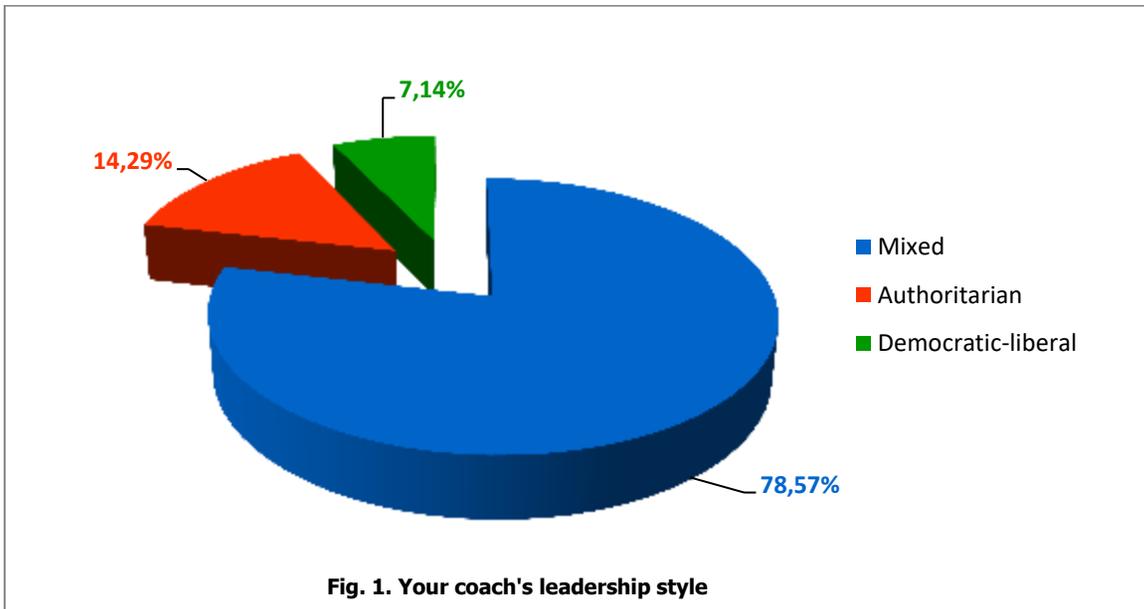
The analysis of the results aims at interpretation of the responses given by the female basketball players about the stress factors they most often encounter in a basketball competition, their psycho-physiological changes in stress condition, the influence of stress on their behavior, as well as the strategies they use to reduce or eliminate it.

Figure 1 presents the first aspect of the analysis. It is related to determining the coaches' leadership style and whether it influences their behavior in stress situations. The results show that 78.57% of the female basketball players define the leadership style as

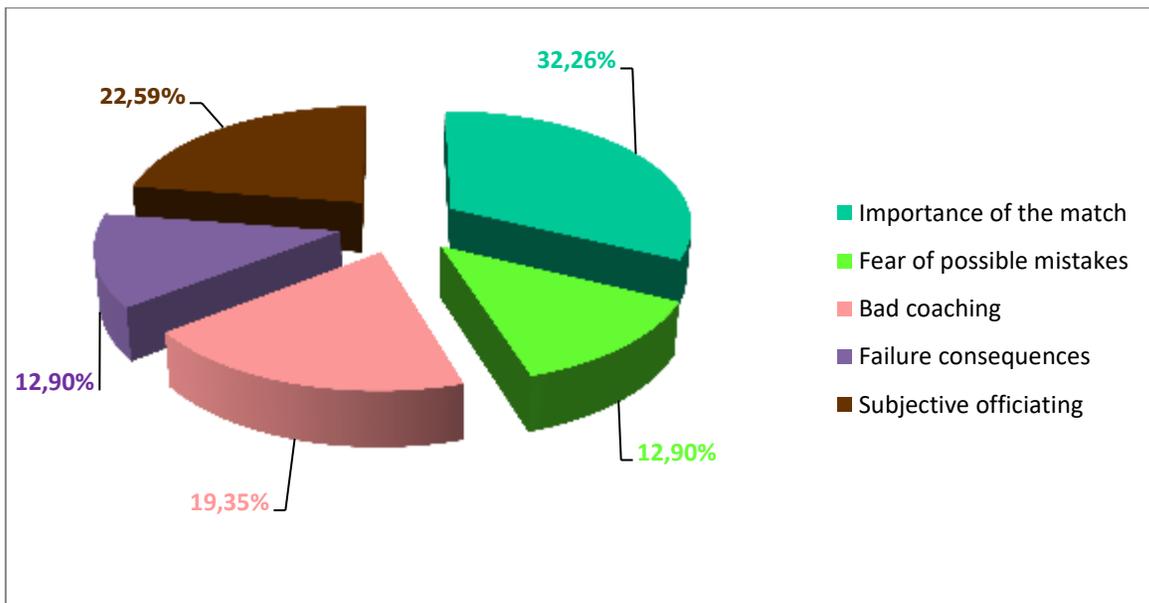
⁸ Д. Дашева; Кл. Бойчев, Ж. Желязкова. Класификация на стресовите фактори и стреса в спортната дейност. – ВФК, № 1, 1988, стр. 10-17.

⁹ Д. Дашева, Стрес и адаптация в спорта. НСА прес, 1998.

“mixed”. More seldom the style is “authoritarian” – 23.08% and “democratic-liberal” – 7.69%.



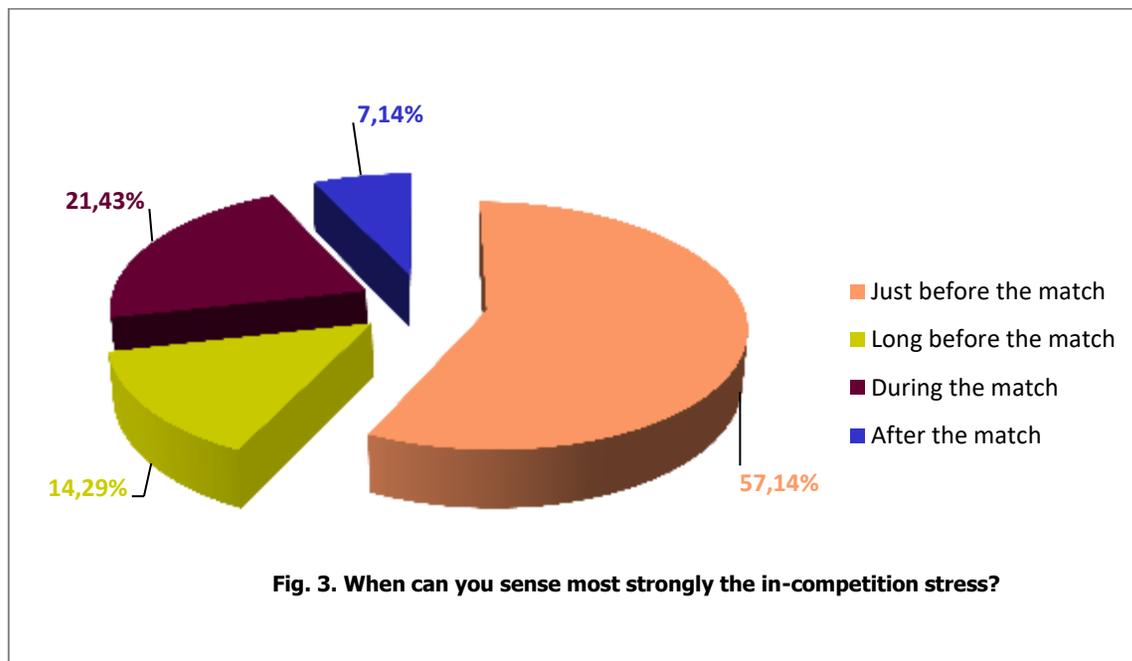
Establishing clear rules and just management is the base which the team management can use to stimulate the female basketball players' intellectual and sports-technical abilities and to achieve a beneficial synchronization between coaches and athletes. This ability to trust and rely on somebody, to feel protected by them, is the premise for the consistent results of basketball teams. Figure 2 shows the responses to the question “Which of the following factors provokes the greatest in-competition stress?” (fig. 2).



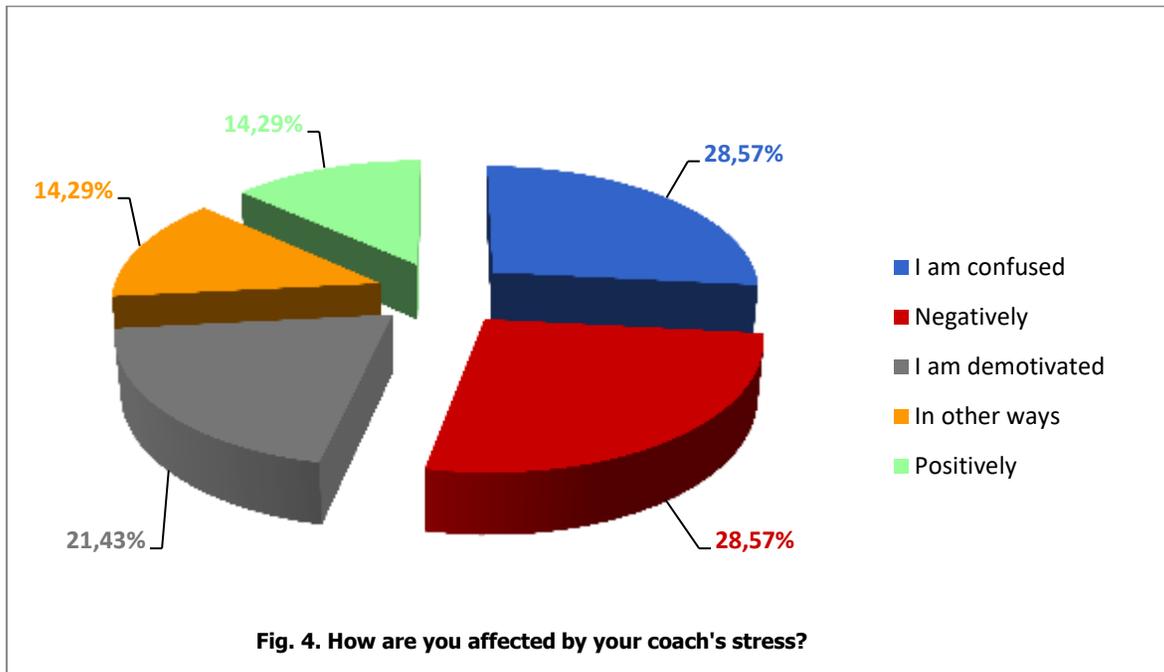
The prevalent response is “importance of the match” - 32,26 %. This is logical as regards the successful performance during the upcoming matches from the qualifications for the European Championship. The National Female Basketball Team last qualified for the final phase of the European Championship in 1996. The response “subjective officiating” was indicated in 22.59 % of the questionnaires. What worries us more is the 19,35 % of the competitors who are afraid of “bad coaching”. The other two responses, which received the same percentage, are indicative that the national team female players are confident in their abilities and do not fear potential failure.

The next question was “Have you ever lost a match in such a condition?”. The most often provided response is “yes, sometimes”; 21.43% responded “no, never”; and 7.14% - “yes, often”.

The responses to the question “When can you sense most strongly the in-competition stress?” are quite interesting (fig. 3). It turns out that more than half of the female basketball players or 57.14% say “just before the match”. For other 14.29% this moment is long before the match. During the match, the sense of stress is typical of 21.43% of the researched individuals; and last but not least - 14% experience in-competition stress after the match. This valuable information shows the predominance of the psychic stress expressed in pre-start condition, just before the beginning or during the match itself.



In an answer to the question “How are you affected by your coach’s stress?” the most often indicated responses are “I am confused” - 28,57% and “negatively” – 28,57%. “I am demotivated” was the response given by 21,43% of the competitors, “positively” – 7,14% and “in other ways” - 14,29%.



We can presume that the female basketball players have not built their own inner protection against this stress factor. This specific self-regulation of behavior could be viewed as an integration of the intellectual abilities, value system and experiences. We believe the results obtained are a base for further debate and research.

The successful mastering of the stress condition in basketball players is related to knowing the psycho-physical changes it induces. The results show that most often the psycho-physical changes relate to: “quick pulse”(30,30%), “lack of concentration” (21,21%)and “stomach crumps” (15,15%). This shows that the strong psychic tension affects to a great extent the physiological changes in the basketball players’ organisms.

Sport specialists and coaches who work with female basketball players would be particularly interested in the ways the competitors use to subdue stress situations in-competition: before the very match, during the match and after it. Before a match the desire to win, the raising of the teammates’ confidence, and the extensive warm-up are among the prevailing responses. The sense of responsibility towards the team and the suggestion of good preparation are the responses that prevail as regards overcoming stress during a basketball match. Taking a shower, listening to music, having a meal and talking with the family are the ways to overcome stress after the completion of a basketball match.

Conclusions

On the base of the analyses made, we can draw the following conclusions:

The prevailing stress factors for the female basketball players are: the importance of a match, subjective officiating, bad coaching, fear of possible mistakes and failure.

The in-competition stress is most often related to the time of anticipation of a basketball match and is characterized with a clearly expressed psychic manifestations. The prevailing psycho-physiological manifestations of stress are: quick pulse, lack of concentration, and stomach cramps. The mistakes and the consequences from a potential failure are less influential.

Knowing the stress condition as a factor in contemporary sport and the strategy for its overcoming will help specialists either to use it or eliminate it.

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