EXPLORATION AND COMPARISON OF STRESS FACTORS AFFECTING COMPETITION PERFORMANCE IN NATIONAL BASKETBALL TEAMS OF WOMEN AND ADOLESCENTS

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ABSTRACT

The increased requirements towards the efficiency of sports activities and the dynamics of basketball game call for a high resistance in stress situations. Revealing the differences in the manifestation of stress among elite female basketball players and adolescents contributes to the easier and more effective coping with the reactions which stress provokes.

The purpose of the study is to help develop individual or team strategies for overcoming and coping with stress in competitive basketball. The key importance and the main tasks are related to the study of specialized literature, establishing the leadership style of coaches of the national basketball team for women and the one of adolescents, and its influence on the players. Furthermore, the material includes a study of the factors that cause stress in the basketball race. A specialized questionnaire was used for the survey. The completion and the concluding results, as well as their analysis will help improve the psychological condition of basketball players of different ages.

Key words: basketball, female national team, adolescents, stress factors, sports performance.

INTRODUCTION

The term “stress” has a specific meaning and it derives from the Latin word *stringere* (meaning ‘to draw tight’, ‘pressure’) which in English language is used to describe people’s behavior or/and someone’s experiences.

The prevailing opinion is that stress is a physiological phenomenon which occurs as a result of strong, unusual or continuous stimulus, which demands full activation of adaptation mechanisms. Its role is not only to protect the individual from the stressor’s effect, but also to build a system for overcoming efficiently the stress factor in its future occurrences, that is to produce the so-called preventing reactions to external stimuli (P. Anokhin).

Different factors can be stressors if they put high demands towards the adaptation process (Virus, 1981). The stressor is a disturbing factor which brings the organism out of its usual limits inherent of its physiological constants. This leads to distortions in the dynamic equilibrium of the regulatory systems (Razumov, 1986). Also, the stimulus which causes the unlocking of the reaction to stress is called a stressor (Everly and Rosenfeld, 1985). But, according to them, a stimulus becomes a stressor depending on the cognitive interpretation, i.e. based on the significance a person would attach to it.

Some authors point out the following as main fac-

tors causing stress – the importance of the match, the purpose of the competition, and the expectation of the start (Parfit, Jons, Hardy, 1990). Others indicate as a major factor the extent of mismatch between the momentary condition of the sports player and the condition which has been envisioned (Kerr, 1990; Fazey & Hardy, 1988).

In sports activity, the prevailing opinion is that the competitive performance is defined by the competitive achievements of players. It is a combination of ranking and the level of the specific competition, but in basketball in order to determine performance, the game efficiency of each one of the players as well as the efficiency of the whole team are of great importance.

Sports activities run in the form of training and competition. The aim of the training is to reach the so-called “preparedness” which is the foundation of the opportunity for achievements, for high sports results.

It is a known fact that the well-trained condition, the physical and technical preparedness do not define uniquely and automatically the achievement and the level of performance of the player. They are just the prerequisites for a successful realization in sports. The performance, the sports result demonstrated during the competition, is a product of the integral

manifest of the personality (Iancheva, 2004).

Contemporary basketball has high requirements towards the physical, psychological, technical and tactical capabilities of the players and their coaches. An important factor for winning is the multidimensional and high-quality preparation of the basketball players, provided by their coaches. The team work of the players, the coaching style of their trainers, the personal skills and characteristics define the interdependence of the preparation factors.

The purpose of the current study is to compare the factors which cause stress in elite experienced, as well as adolescent, female basketball players. This will help the development of individual or team strategies for overcoming and coping with stress among basketballers during competitions.

METHODOLOGY OF THE STUDY

The current study was conducted in the period May 2016 – November 2018.

In order to fulfil the set purpose, we carried out the following tasks:

- ✓ Studying specialized literature on the topic;
- ✓ Defining the coaching / leadership styles of the training coaches of the national basketball teams – women and adolescent, and their impact on the players;
- ✓ Examining the factors which cause stress during a basketball competition.

The subject of the study is the impact and specific characteristics of stress in the sports activity basketball.

The survey respondents' base are 52 female basketball players at the age of 16, 18 and women.

Aiming to explore more thoroughly the stress occurrences among national basketball players – women, we have used a special survey questionnaire

created by D. Dasheva (2005). The survey includes:

- ✓ Personal data which will enable a better interpretation of the gathered information;
- ✓ A question concerning the leadership style of the training coach;
- ✓ Specific questionnaire covering the factors which cause stress, the stress reactions, the impact of the coach's stress, and the techniques used to reduce and / or overcome this condition.

ANALYSIS OF THE RESULTS

The analysis of the results is targeted towards interpretation of the answers by the respondents – female basketballers, regarding their most-frequently experienced stress factors in the basketball competition matches, the psycho-physiological changes under stress, the influence of stress over the players' behaviors, as well as the strategies which they use in order to decrease or eliminate it.

Figure 1 below presents the first aspect of the analysis which is related to defining the leadership styles of the coaches, and whether it affects coaches' behavior in stress situations. The results show that the majority of the elite highly-skilled (a) and the adolescent (b) female basketball players consider the leadership style of their coaches as "mixed" (a – 78,57%; b – 55%). More rarely the style is "authoritarian" – a) 14,29%, b) 10%, and "democratic-liberal" – a) 7,69%, b) 7%. Setting of clear rules and fair leadership is the base through which the team management can stimulate the intellectual and sports-technical abilities of the basketball players aiming to achieve winning synchronization in the work between coach and players. This ability to trust somebody and count on them, but also feel protected by them is a prerequisite for stable results in basketball teams.

Figure 1. *Your coach's leadership style*

The next question is “Which of the following factors provokes the greatest in-competition stress?” Figure 2 in our representative national team – women (a), the most common answer is “Importance of the match” – 32,26%. This can be easily explained with the demand to perform successfully in the forthcoming matches – qualifications for the European Championship.

Our women’s national basketball team has not qualified for the final phase of a European Championship since 1996. The reply “Subjective officiating” registered 22,59% in the surveys. What is more disturbing is that 19,35% of the players fear that “Bad coaching” may occur.

The two remaining claims have equal percentages of the responses which is an evidence of the fact that the women’s national basketball team players

are confident in their abilities, and they do not fear a possible failure.

Among the teen-players, the most frequent answer to this question is “Fear of possible mistakes” – 12,5%. Big percentage points have answers like: “Disbelief in own ability” 11,2%, “Strong opponent” 10,9%, “Importance of the match” 10,2%, and “Subjective officiating” 9,5%. The remaining answer options have lower percentages of responses.

Basketball game is a team sport and it is normal that the fear of making mistakes and the lack of confidence in one’s own abilities can put the players into interdependence relationship and moral responsibility between each other, for the results of the matches they will play in.

Figure 2. Which of the following factors provokes the greatest in-competition stress?

The next question was “Have you ever lost a game in that stressed condition?”. Among women players the most frequent answer was “Yes, sometimes” – 72,53%, 21,43% have answered “No, never”, and 7,14% with the answer “Yes, frequently”. Among adolescent players, the answers are “Yes, frequently” – 53,1%, 25% “I don’t know”, and 9,4% have answered with “Yes, once”.

It is interesting to know what the answers are to the question “When can you sense most strongly the in-competition stress?” (Figure 3). It turns out that for more than half of the players, both in women’s national team (57,14%) and the young team

(62,5%) this moment is “Just before the match”. For others, national team women a) 14,29% this is the time “Long before the match”, “During the match” 21,43% of the respondents have experienced stress, while 7,14% feel stress of the competition “After the match”.

Among the adolescent female national team players b) 14,6% feel this is the time “Long before the match”, while 10,3% of the teen players have answered “During the match”. This valuable information gives us the conclusion that the psychological stress is mostly experienced during the pre-start phase before the match and during the match itself.

Figure 3. When can you sense most strongly the in-competition stress?

Figure 4 presents the replies to the question “How are you affected by your coach’s stress?”. Elite national team players most frequently answer: “I am confused” – 28,57% and “Negatively” also 28,57%. “I am demotivated” is the answer by 21,43%, 7,14%

say “Positively” and “In other ways” – 14,29%. Among adolescent basketball players, 49,5% have answered “I am confused”, 10,5% - “Negatively”, 7,4% - “I am demotivated”, 9,5% - “Positively”, and 23,2% have answered with “In other ways”.

Figure 4. How are you affected by your coach’s stress?

We can guess that to a great extent the basketball players haven’t built their internal defense mechanisms towards this stress factor. This specific auto-regulation of behavior can be considered as integration of the intellectual abilities, the value system and the experiences. We think that the results are the basis for further study.

The successful overcoming of a stressful condition among female basketball players is related to the high awareness of the psycho-physiological changes it evokes. Results show that the most commonly experienced psycho-physiological changes among women, as well as adolescents, are: (a) - “fast pulse rate” (30,30%), (b) - 14,00 %, (a) - “lack of con-

centration” (21,21%), (b) - 12,6 %, and “stomach cramps” (a) - (15,15%), (b) - 11,2 %. This reveals that strong psychic stress affects to a great extent the physiological changes in the players’ organisms.

Sports specialists and training coaches who work with female basketballers of different ages, take special interest into the approaches which players use in order to cope with stressful situations in competitive conditions – before the match, during the match and after it. Before the match the defining emotions are the desire to win, the uplifting of team-players’ self-confidence and the intensive warm-up. The thought of responsibility towards the team and the suggesting of good preparedness

are the answers which are most-frequently mentioned as ways of overcoming stress conditions during the match itself. Taking a shower, listening to music, eating food and conversations with the family help reduce the stress after the basketball match has finished.

CONCLUSION

As a result of our study we can draw the following conclusions:

The most significant stress factors among female basketball players of different ages are the following – importance of the match, subjective officiating, bad coaching/ leadership style of the coach, fear of possible mistakes, and fear of failure consequences.

The competition stress is most common in the period before and in anticipation of the start of the basketball match, and it has clearly defined psychological exhibits. The most frequent experiences in these stress conditions are fast heart-beat rate, lack of concentration and stomach cramps, while the number of mistakes made and the consequences of a possible failure have lower impact overall.

Knowledge of the stress condition as a factor in modern-day basketball, and the strategy for its overcoming, usage or elimination, will help basketball specialists who work with players of different ages among female basketballers.

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