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WARM – UP IN VOLLEYBALL BEFORE THE MATCH

1. Introduction

Sport, at the achieved level of development, requires the athlete to be well warmed up, both prior to training and right before the competition. The aim of warming up is to prepare the body for the upcoming effort. Given that warm up precedes every practice and competition, we are required to pay special attention to this problem.

Worldwide, there are mixed opinions in relation to the warm up among experts.

There are experts, including scientists, who argue that warming up has no positive effect on the body, nor it is a condition for the work effect. They justify such claims of theirs with the fact that in some sports even world records have been achieved and the athletes have not warmed up prior to such supreme results.

Contrary to these claims, we who work in volleyball (experts and scholars), have a clear attitude that the warm-up in volleyball is necessary and useful, both before training and before matches. In support of our position there is the fact that in volleyball – there is certain time and manner for pre-game warm-up determined by the competition rules.

Russian scientist Ozolin in his works presented the fact that even the ancient Greeks two and a half thousand years ago implemented some kind of preparation of the body before competition and struggle. It is well known how it was in the past, as the sport evolved. Today, the sport experienced a great expansion, so it is logical that some significant changes occurred in regard to the warm-up as well. With the increasing level of sports achievements, and aspirations to achieve increasingly better results, the importance of warming up has become one of the important factors that affects sport performance and athletic accomplishments. The degree of development of sports and knowledge that we have achieved, require that this problem is studied on professional and even scientific basis. In different sports, which are many nowadays, there are various types and forms of warm-up. We who work in volleyball today believe that warm up is to be aligned with the specific characteristics of training and competition, whereby individual characteristics of players have to be taken into account.

Warm up in volleyball developed along with the development of sport in general. In the past, and there were mostly done static exercises with a fairly uncoordinated and unskilled movements. Today, the warm up in volleyball is performed in much more vivid and dynamic manner, and is appropriate to the needs of the practice or game. Our free assessment is that the warm up of volleyball players today is at a much higher level than it was before, and that we are particularly recognizable and distinctive by this. Some even believe that the volleyball players make a quality warm up before the game. Without going into the needs of other sports, we are interested in this aspect of our daily work, how we can further improve it, by using the knowledge discovered by our predecessors, in scientific and professional terms. The problem before us is how to improve the warm up process in volleyball.

2. Methodological Notes (theoretical framework)

2.1 Morphological and physiological aspects of warm-up

It is a well known fact that an increase in work capacity of man comes as a result of well-warmed up body. Analyzing the needs of volleyball players at practices and games, we want here to recall a few facts that are well known in the morphological and physiological space of man and that can have a significant impact on the process of warm up. From the point of view of the needs and demands of the game of volleyball, the muscles, joints and basic body functions have priority.

In the morphological space as for now it is found that muscles with some higher temperature - well warmed up, when working have better coordination, greater flexibility and are capable of faster and more complex contractions, which is a prerequisite for their efficient work. Increased speed of nerve-muscle reaction has a positive effect on accuracy, power, speed, and other elements of the movement of which result in volleyball often depends. Tests in our country and abroad have clearly demonstrated that warmed up volleyball players achieve better results than those who did not warm up.

When the joints are concerned, it is essential to know very well the characteristics of joints in man. Basically, the joints of the human body can be divided into two groups: mobile and fixed (less mobile). The movable joints are: ankles, wrists, hips and shoulder joints. The less mobile (immobile) joints include the knee joint and lumbar spine. If ankles and hip joints are not well warmed up, knee joints become affected, and that is a common cause of injury in volleyball. If hip and shoulder joints are not well warmed up, lumbar spine shall suffer, which is also a very common case of injury in volleyball.

Based on the above facts, it is clear that well-warmed muscles and joints reduce the risk of injury. We suggest to coaches to pay due attention to warming up the joints and joint connections, using the principle of "joint by joint" and gradually, in order from top to bottom or vice versa. Coaches and physical education teachers who work in volleyball mainly know this and well warm up the joints in most cases.

With regard to the physiological aspects of warm up, it is known that to run continuously for 3 to 5 minutes causes a change in the cardiovascular system, as well as in respiratory system. This change is manifested in man as the increase in body temperature, acceleration of blood flow, pulse rate, respiration rate is increased and there is a slight irritation of the nervous system.

We have hereby highlighted only some of the facts that have been found in recent years via scientific research, and everyone should know that the proper warm up properly prepares the body for the efforts that await it, in training or in a match.

It is our opinion that in regard to the morphological and physiological space there are many unknown facts that need to be investigated and which may significantly contribute to the quality of sportsmen warming. It is for now sufficient to say as a fact that - a quality volleyball warm-up can greatly contribute to reducing the risk of injury in the sport of volleyball.

2.2 Methods of Warm-up

Warm-up in sport can be divided into: passive, active and combined warm-up.

Passive warm-up includes: massage, hot shower, warm air, light energy, various creams, gels and the like. Massage in volleyball is difficult to apply, because there is a large number of players, on the other hand there are not many clubs and even national teams, that have a masseur in the coaching staff. The cause of this are high material costs of investing in this type of work. In volleyball some form of self-massage is usually used, especially for the body part that was previously injured.

Active warm-up is the most widespread and most efficient form of warm-up used in volleyball. The primary means of active warm-up as exercise, with and without props, for movement of certain parts or the body as a whole. In this regard, the most widely used are various forms of walking and running, free exercise, exercises to strengthen the muscles and joints of preparation, and a variety of stretching exercises and relaxing. The scope and intensity of active warm-up depends on many factors which include annual training period, the age and quality of the group, the type of competition, and of being a player. Principal warm-up at training is conducted by coach, and at matches, by players themselves, with the control of coach.

Combined warm-up is most commonly used in practice, and the coach is the one who chooses the means and ways of warm-up, by first performing the passive, and only then an active warm-up.

In further analysis and elaboration of the problem before us, warm-up in volleyball can be divided into: general, special and specific warm-up.

General warm-up in volleyball aims to raise the function of the body from sleepy to a higher level. Warm up before the game is different from warm up for practice. In general warm-up what is usually applied are stretches, jogging and body forming exercises. The choice of exercises that are used in the general part are to be directed to help handle the warm up and stretching of muscles and joint mobility. General warm-up exercises are applied in the standing, sitting and lying position. The number of repetitions and a selection of exercises are performed by the coach.

Special warm-up in comparison to the general one lasts much longer and includes work with the ball and some movements, suitable to the game itself, such as falls, jumps and landings.

When it comes to working with the ball during a warm-up, which we have called a special warm-up, repeating some elements of the volleyball game, such as passing, serving, smashing, receptions and the like.

Specific warm-up is the kind of warm-up which is related to the man as a person and his role in the team. In volleyball, there is a player who is called Libero and is performs warm up in a specific way for his role in the game. On the other hand there are such players who want or need to warm up longer than the time allotted by propositions competition. Why would a coach have something against it if a player wants to get out early to warm up and, for example, make stretches, or exercises that require some more time. Players should be respected as persons and allowed such a specific action in the warm up, provided they do not disturb the established order and discipline of the team as a whole. Quality players have a general knowledge of the technical and tactical actions in volleyball, but in the game they have some special roles, such as the positions they play. Setter, blocker, corrector, libero, the specific warm up is about to be as efficient as possible, in view of its role and responsibilities of the team. When we watch a volleyball game, notice how it's all connected into one harmonious whole. What the duration of the mentioned sections of warm is up is the skill of each coach and there is no general pattern or model of preparation. Our advice is that the coaches in their work respect the principles of work both in training and in matches, but not by inadvertently ignoring individual strengths and abilities of each player, especially if they make a positive result in the game. This advice also applies to the course of the warm up, and the coach is not to destroy the player's individuality, but their work should develop skills and characteristics to the maximum, but for the purpose of achieving good results in the game.

Every individuality and uniqueness of the player that makes a significant contribution to the team is welcome and should be supported at every opportunity.

2.3 Warming in relation to the age of players and competition period

Today children start early to play sports, including volleyball, and this age limit constantly shifts to lower ages. In such circumstances, the coaches must be able to know the biological development of the child, to know well what they should do and how. First of all, they should adhere to the principle that the younger children, the warming should be longer and more diverse. In the early stages of training through warm up we are trying that the children learn certain attitudes and postures, and movements appropriate volleyball. Warm up is an integral part of the training, so it is necessary that the coach conducts it. There are cases when a coach leaves the players the freedom to warm up on their own, there are cases in the younger categories that a coach chooses a player to present exercises that other then repeat. We find this to be erroneous, because the coach is the one who should always do his work, and to give over warm up to someone else may harm the coach himself, but also a player who is assigned this role. The older players are, their fund of knowledge in volleyball is growing, even in terms of warm up, both practically and theoretically. Upon approval of the coach, warm up before the game can be lead by the team captain, provided he is properly trained. The authority of the coach is earned hard and reckless actions or statements can easily make him to lose it.

When it comes to periodization of the training process, warm up should be aligned with the needs and tasks to be carried out during this period. In the pre-season warm-up is longer and slower, and the closer the competition period is – the warm up becomes shorter, quicker and more focused on the tasks that await players in the game.

Regardless of the age and period of the training process, the coach must remember that it is his job and that it should not be left to others. The authority of a coach is made on his knowledge, also in terms of warm up, which means that he must always express his knowledge and skill.

2.4 Warm-up and its importance to the technical condition of the players before the match

Today, in sport psychological state of athletes is often mentioned, and the involvement of psychologists in sports. In volleyball, due to lack of funds, but also the need, there is no involvement of psychologists, as psychologists in our country appear as magicians. Psychologist who would engage in volleyball would have to know the essence of the game, not only to pass his judgment on the basis of some general observations and tests. Respecting each job and profession, we point out that the top coaches in volleyball read pedagogical, psychological and medical books and manuals, follow the achievement of other modern sciences and apply their knowledge in practice.

Along with the development of physical properties, technical and tactical knowledge volleyball players also develop mentally important features, which are also important for the process of training and competition. Willful preparation and a special kind of concentration of players, certainly should not be ignored, but through training and competition slowly developed and guided sothat the team approaches the triumph.

If a player is well warmed up, then his willingness and security grow, so he can handle the tasks set before him, both during training and in the game. In this regard, the preparation

of players for the game, warm up plays a very important role. Before important matches, a player before start can be found in three states: starting fever (hyper-arousal), starting apathy and combat readiness to compete with an opponent. The first two cases: starting fever and starting apathy, have negative impact on sport performance. Combat readiness is positive for success, because it shows the willingness of players to participate in the match. Properly focused and well-managed warm up of both team and individual, can contribute significantly to achieving good results in the game. Well warmed up volleyball players are in good mood before the match, they believe in themselves and their team and are willing to compete with the opposing team. A good coach certainly knows this and therefore by thoughtful warm up contributes to psychological preparation of players before the match. In this respect there is an important and unexplored area that should be better studied, analyzed and described in order to improve warm up at key moments for the volleyball sport.

3. The main results of the work

3.1 warm-up models in volleyball

There are different models of warm up in volleyball, both for training and for the game. For the purposes of this study, we decided to present three models of pre-match warm-up, which is usually applied in our country.

3.1.1. First warm-up model

It is used with the weaker teams, begins with running around the playground and in their half of the court, in a column, for a few minutes. After completing the run, players begin with the shaping exercises, usually every man for himself in one of their own rhythms. After the general warm-up, they go to work with the ball in any repetitive exercise as technical elements, rather slow and static. We find this way of warming up a bad one and players who are so warmed up achieve some work effect only after the first set of the match is played.

3.1.2 Second warm-up model

A model that is often used by major league teams, is reflected in the following: players take to the field and the first thing they do is sit down on the ground and every man for himself performs stretching exercises. After stretching, in the sitting and lying position, they switch over to running in their own part of the court, it is usually on the side and parallel to the network. Following completion of running, everyone is working shaping exercises for themselves, Primarily in the upper part of the body. As in the previous model, after a general warm-up, they go to work with the ball, which is mostly the same in all models, and they are repeating some of the technical elements. This second model can not be described as bad, because this is at least better in the form of exercise than the first model, and in some ways resembles the style of play in volleyball. The main disadvantage of this model of warm up is that the players apply stretching exercises by routine, considering that it is a popular fashion.

3.1.3 Third warm-up model

The third model is the model of warm up that we recommend to the players, regardless of gender, age and the importance of the match. This model is limited to propositions of the competition, as the previous two models that are related to quality teams. Warm-up starts with the players themselves (respectively) doing stretching exercises. It is understood that players are trained, and have the knowledge necessary for the exercise. After stretching, all the players run in slow pace for about 3 minutes. After this general warm-up, the players are ready, because the body temperature is raised, and work of heart and respiratory system increased. After the majority of the players stand in a circle and do the exercises, which is usually conducted by the captain, and they are appropriate to movements in volleyball. In these exercises, exercises dominant are power and endurance exercises, and the goal is to get large and small muscle groups better vascularized and toned. In a special section of the warm up follows organized (defined and agreed upon in advance) moving with falls and jumps. This is the time when players begin to create an atmosphere of competition, by loudly supporting each other. This part ends with movement and jumping in front of the net. In a special and unique part of the warm-up follows the work with the ball and in pair (fingers, hammer, spiking). Judges give a signal to the teams when warm up is allowed on the network and the members of the teams freely make spikes according to their role in the team. At the end of the warm-up, 3 minutes before the end, they are moved on to the service and service reception.

In this third warm up model, it is very important that each player (from the beginning of warm up) is aware of what he does and why he does it. It is necessary to integrate in the warm up all those activities which form the basis for what is expected during the game.

After exposing three models of pre-match warm-up, it makes sense to ask which of these models is best. The best model is the one that suits the players and the conditions in which this warm up takes place, so it should be tried in practice and one should take his own position.

4. Conclusions

The authors of this paper belong to the group of experts and scientists who believe that warm up before sports efforts can not be disputed, and in volleyball it is even necessary.

Based on the facts presented in the paper, it is clear that the quality warm up is the best protection from injuries in volleyball, as in other sports.

Some tasks that significantly affect the learning process in volleyball can be achieved through warm up.

In practice, given the importance and necessity, warm up is not given enough attention. It is our opinion that in the space of warm up there is much place for technical and scientific research.

Science is not theorizing. Real science is the search for facts, truths and principles to solve some of the problems we are facing with. Space of warm up in the sport, and therefore, in the volleyball, has not been sufficiently studied and researched, and this is an opportunity to solve the unresolved questions and concerns for the benefit of the further development of players and the sport of volleyball.

Every workout, every game brings something new and this is a kind of research that coaches perform daily. Scientific research is the kind of research that is performed by quality experts (PhDs), using the scientific methods. To both this is a new area for applied research. If the field of warm up in volleyball is still unexplored, then whoever cleans this field from weeds and ignorance contributes to find out more about the problem which is before us and which waits for a solution.

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