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**ANTHROPOLOGICAL CHARACTERISTICS DANCERS
ACROBATIC ROCK'N'ROLL****Summary**

One of the important factors in achieving top results is the optimal development of all necessary anthropological feature athletes. From year to year, are challenging tasks ahead of acrobatic rock'n'roll dancers and is therefore an increasing need for high quality physical preparation, which requires knowledge of the necessary anthropological characteristics. The aim of the paper is to review and analyze anthropological characteristics dancers acrobatic rock'n'roll. A detailed analysis and examination can be noticed that the anthropological characteristics are important for this sport and thus improve the training work, working in particular on the development of those characteristics that are essential for success in this sport.

Key words: anthropological characteristics, dancer, acrobatic rock'n'roll

1. INTRODUCTION

Acrobatic rock'n'roll is one of the conventional sports. The compound is dance figures and acrobatic elements, more precisely, sports dance that combines rock and roll music, dance arts and gymnastics elements. This is a fantastic combination of attractiveness, rhythm and dynamics. From America's 60s rock'n'roll rhythm arrived in Europe, and acrobatic rock'n'roll was created in the mid 70s and in a very short period of time becomes incredibly popular on the entire European continent. Official competition in this type of dance starting to organize 70s XX Ages. In the competitive form appears in 1974 when Germany, Italy, France and Switzerland established by the European Association of rock'n'roll, plugging Canada, several years later, becoming the World Association of rock'n'roll. Establishment of the German rock'n'roll Association (DRRV) has the greatest significance for its establishment, standardization and evaluation. Today, many national federations rock'n'roll dance, gathered and organized in the framework of the World Confederation of rock'n'roll - World Rock-and-Roll Confederation (WRRC) which organizes both national tournaments, and world competitions and tournaments. Within this confederation are determined systems of the competition, categories and classes. In addition to individual pairs competition, organized competitions and formations.

Performance in acrobatic rock'n'roll-in consists of the elements of dance and acrobatic programs. In doubles competition acrobatic rock'n'roll, there are six categories. The youngest

categories are not allowed to use semi-acrobatic and acrobatic figures, but only a limited dance program. Dancers in the transitional period (juniors) acrobatics performed as part of the dance program, while the senior categories dance programs evaluated and performed separately from the acrobatic part. Couples in the contest performed two shows: the floor and acrobatic part. Floor (dance) part of the program includes part of the program in which contestants perform choreography made up of different dance steps and figures without performing acrobatic elements for 1 -1.5 minutes depending on the category. Acrobatic part of the program represents a special part of the competition where couples get together with dance elements and perform aerobic maneuvers for up to 2 minutes. Number of acrobatic figures by different categories (0-10).

In his superb form - in the international category A senior dance and acrobatics were developed to perfection, and introduced increasingly difficult gymnastic elements (free somersaults in all shapes, twist, high leakage, partner rotation around its axis and the other figures in the air from breathtaking). Acrobatic figures for each category are defined in the ordinance and the security level for each category separately, except for A, which does not have limitations in acrobatics.

The fitness requirements of this sport is very demanding, primarily due to the intensity of the activity itself and the complexity of motion containing jumped basic step, jumps, leaps and acrobatic figures. Performing a variety of dance and acrobatic figures in the choreographies of acrobatic rock'n'roll performed to music with a set number of strokes per minute (46 - 52 T/min).

2. ANTHROPOLOGICAL CHARACTERISTICS

Anthropology (science of man) teaches us, studying the man as a whole, that every man, especially an athlete, a separate entity characterized by unique structure of anthropological characteristics. All these characteristics trainer should be fully aware that, based on their capacity to plan and develop sports form of fitness.

Anthropology characteristics can be structured into several groups that represent the capabilities and characteristics of man:

- Morphological characteristics,
- Functional capabilities,
- Motor ability,
- Cognitive abilities.
- Conative characteristics and
- Sociological characteristics.

Morphological characteristics make four factors namely: a factor of longitudinal dimension of the skeleton (bone growth and length), the factor of transversal dimensionality of the skeleton (diameters of the joints), the factor of mass and volume of the body (body mass and volumes of body parts) factor of subcutaneous adipose tissue (skin folds certain parts of the body).

The results of previous studies of the morphological characteristics of athletes of various profiles indicate that measures the mass and volume of the body most associated with motor skills. It is also found that subcutaneous adipose tissue factor disturbing motor skills. Some sports are crucial dimensions of longitudinal and transverse dimensionalmosti skeleton. Morphological characteristics are important for the performance of movements in which the whole body or body part moves in space or occupying a particular position.

Functional capabilities depend on the basic functions of the system in the body (locomotor, cardiovascular, respiratory, digestive, nervous and endocrine). The functional properties of an organism shows a direct impact on the size and nature of manifestation in physical activity. There are two general functional properties, depending on the nature of the biochemical processes of energy: aerobic and anaerobic capacity. The level of development of these abilities is specific to each sport discipline and substantially determined by the influence of training. After Medvedev and his associates (1987) boilies criterion for assessing the functional capacity of the cardiorespiratory system is a test of maximal oxygen uptake. It is believed that cardiac output is the most important mechanism of adaptation. The increase in cardiac output is achieved by increasing heart rate and stroke volume of the heart (Horvat, V., 1978.).

Motor skills are those skills that participate in solving motor tasks and are a prerequisite for moving (Kostic, R., 2001). They are very complex and genetically determined, with a high coefficient of innateness and to work on their increase must be good to know. Training process can be, to a lesser or greater extent to improve, which depends on the percentage of participation genetic component. Taking into account all the scientific knowledge obtained in this space (Zaciorski 1975, Kurelić et al. 1975, Gajic 1985), it was found that there are seven basic motor abilities: strength, speed, endurance, coordination, flexibility, balance and accuracy. Motor ability are essential in any learning and are, in fact, the elementary value of the total area of the human motor skills.

Based on previous studies which have been the subject of human motor skills, one can speak of two groups of research. The first group had a taxonomic character, and the other is based on the functioning of the CNS in solving motor tasks. Research taxonomic character defined the factors of the action and topological type. The factors were isolated action type: power, speed, coordination, agility, accuracy, endurance and balance, and factors topological types were isolated dimensions already mentioned the ability to indicate the ability of different parts of the body.

Cognitive abilities (intellectual ability) include more ability CNS enabling reception, transmission and processing of information, thought processes and conscious activities. Based on the research of numerous authors (Momirović, Ismail, Mejovšek, Wolf, Kovacevic, Dzamonja Luria, Das et al.) Is accepted that *general intelligence* (ie, G-factor) consists of three primary factors: *factor perceptual reasoning* (this factor is responsible quick observation), *the factor of symbolic reasoning* (the process of abstraction and generalization) and *the factor of education* (establishment of legality on the basis of determining the important features of objects and phenomena). Research results is a proven correlation between the performance of complex movement tasks and intelligence. What are the structures of the movement and the movement of motor and complex information, it is assumed that certain cognitive abilities should be at a higher level.

Conative characteristics. One can speak of normal and pathological conative factors (which are separate studies in psychology). Based on available research, it can be said that in most studies, there is a positive relationship between physical fitness and emotional health. Crete human activity is correlated with neurologic characteristics of the individual. Research has proven correlation between conative and motor dimensions, for example. Ismail (1969, 1972) has received a positive correlation between some forms of power and neinhibitornog behaviors, as well as the results of co-ordination and balance better if in patients less neuroticism was displayed.

Sociological characteristics. The results of sociological studies have shown that factors in social behavior can be grouped into specific factors. One can speak of: *sociojalizacijskom*

subsystem that includes educational status (level of education of the individual) and a basic residential status (characteristics of the place where he spent his early childhood individual), *about institucionalizacijskom subsystem* talking about professional status (position of the individual in the organization), social status and political orientation, as well as the *sanction subsystem* that includes a basic economic status (standard family), lifestyle (standard of living) and karaktersistike places where people live. These characteristics are important in determination of whether an individual will engage in a particular sporting activity, and why.

3. ANTHROPOLOGICAL CHARACTERISTICS DANCERS ACROBATIC ROCK'N'ROLL

There is one small part of domestic and foreign authors who have studied the anthropological features dancers acrobatic rock'n'roll. However, as this is a very wide area, there are complete works of this type, but they are usually investigated partial segments, mostly in the area of motor skills.

Morphological characteristics of the dancers acrobatic rock and roll

Acrobatic rock'n'roll at its structure is very complex sport, which involves the entire locomotor apparatus, consisting of a series of acyclic movements. As our name suggests its many large fight stunts that these dancers, demand better supplying of muscle with blood, and thus lead to an increase in the number of muscle fibers. The body is such exercises (stunts) develops proportionally, so this dancing Despite the importance of internal muscle development, has significance for its exterior, ie aesthetic form (skin becomes taut and sails). This movement is being operated positively and the skeletal system, because the bones absorb calcium better then and so become stronger.

Dancing acrobatic rock and roll, as well as other kinds of dances, improves posture, because the posture condition for dancing. For proper posture Thierry need his constant maintenance in the form. For its formation is important for balanced development of all muscle groups, and this primarily refers to the muscles of the back and abdomen, as well as mobility in all joints. Regarding the effects of acrobatic rock'n'roll on the body mass, volume and subcutaneous adipose tissue, we can say that it is very important. Due to the morphological characteristics condition the body shape of every man and that some dimensions may not dijelovati at all or very little, such as body height, length and width of body parts, then it is justified in the selection of partners for acrobatic rock'n'roll contact attention just on these parameters.

As for the longitudinal dimensionality can be observed that for acrobatic rock'n'roll desirable that these dimensions in women less, and the reason for the stunts they perform. It is also desirable that the shape and size of the muscles, especially the hull, males are more pronounced because the partners promote and partner acrobatics their endurance and throws (different types of somersaults and support, diving-high leakage, twist, etc.).

The dance and acrobatic figures acrobatic rock'n'roll included in the whole locomotor apparatus. Physique leg is most common when performing various dance figures (basic techniques), then followed by the representation of the muscles of the trunk (stabilization), and the muscles of arms and shoulders which is very dominant in males in all senior categories for acrobatics.

Dancing can dijelovati the shape and size of the muscle, adipose tissue, and it should be used for sizing and shape of the body that are required to have dancers acrobatic rock'n'roll.

Functional abilities acrobatic dancers rock and roll

From the viewpoint of functional skills in this sport, we can talk primarily about anaerobic activity, but also because of repetitions activities (appearances) necessary to secure and aerobic speed. For the realization of this type of dance requires a certain physical effort, which causes the heart muscle adaptation to this effort and to adapt to the training effort. During the competition in acrobatic rock'n'roll in every couple dancing once within each round of the competition (the finals, quarterfinals, etc.) For 1.5 minutes, with a break between two consecutive appearances in duration from 40 minutes to for 2 hours. Because of this motor activity acrobatic rock'n'roll can be considered anaerobic glycolytic activity type.

Motor skills acrobatic dancers rock and roll

Motor skills acrobatic rock'n'roll dancers must be at a very high level, to the dancers were successful in performing motor tasks, what we have in this dance.

Miletic, S. and Mihačić, V. (2008) point out that a hypothetical problem setting performance in acrobatic rock'n'roll in the structure of skills, capacity and knowledge, which must be satisfied, really tight. From motor abilities that are primarily coordination (coordination of the whole body in rhythm and coordination, as well as the coordination of the hands and feet), then forces (repetitive and explosive power), speed, balance and flexibility.

Coordination is a complex ability composed of a plurality of specific skills and a request by temporal and spatial accuracy of movement and motion. For dancers acrobatic rock'n'roll it is manifested through the special abilities of temporal and spatial parameters of dance techniques, motion and movement and is a fast synchronization of complex motor tasks in time and space. It can be particularly studied: coordination of arm, leg coordination, coordination of the whole body, coordination in rhythm, movement and reorganization stereotypes learning of complex motor tasks (Hošek, 1976) as well as other hypothetical factors that were obtained in studies of coordination.

Coordination is, as we know, called "motor intelligence" and viewed through several segments importance. The acrobatic rock'n'roll in the first segment of the importance of coordination in rhythm, defined as the ability of a coordinated execution of predefined motion structures in a given rhythm. Next is the coordination of the whole body or one of the topological region. The third segment of coordination is the speed of learning of new motor (dance) tasks that makes the connection between dance structures and the basic techniques of the sport. It is described as the ability to learn a large number of new movement structures.

In addition to coordination, this sport, and ensures the development of some forms of power, primarily repetitive (some topological region), and explosive leg power when performing jumps and type a kick (kick-s), as part of the basic techniques of the sport. Of course it is for this sport need to work on developing aspects of power, whether in its repetitive or explosive manifestation. However, acrobatic rock'n'roll through its specific part (plus tumbling techniques)

than to define their movement only in these forms, and more through the woods speed strength, explosive strength and dynamic strength (Miletic, S., Mihačić, V., 2008).

Instantaneous power is defined as the ability to perform as larger stresses at high speed movement, or in other words, when the speed-related power then talk about the speed power. Ekeplozivna power is defined as the maximum energy of a movement in the shortest possible timeframe, while the repetitive force includes the ability to repeating movement that has to do with muscle endurance. Dynamic endurance in strength is the ability of long-term work in dynamic conditions. All these forms of power are necessary for success in acrobatic rock'n'roll-in.

In this sport can also perform these elements in its structure developments include situations in which dominates the impact on the muscles of the upper body torso and arms. The maximum load of the lower extremities occur in lands later executed stunts. Therefore, we conclude that the performance of acrobatic elements with a load of muscles of the lower limbs (for take off and landing) greatly needed and the power of arms and shoulders (when performing various endurance and acrobatic elements). For these dancers, as noted above, is essential to all forms of power (due to intense jumping attention to the endurance strength, endurance ekaplozivnoj leg strength and upper body strength for throwing and catching). Also for better stability of the hull, which is necessary for successful and qualitative technique acrobatic elements, requires the static strength of the whole body.

Acrobatic rock'n'roll running at a fast pace with a complex technique to dance steps, and acrobatics, and dancers from the requirement to have the ability to speed. In these activities there is an increase cardiovascular sudovnog, respiratory and other systems, as a condition for the development of endurance, especially speed endurance.

For dancers acrobatic rock'n'roll necessary increased mobility in the joints of the whole body. During the performance of acrobatic elements is very important range of motion in certain joints and hinge systems as an aesthetic component, which manifests itself through precision position of the body and body parts. Acrobatic rock'n'roll requires, but also affects the development of flexibility, as one of the essential motor skills for this sport. For these dancers is necessary capability of active and passive flexibility, and to a large extent. Increasing flexibility significantly reduces the risk of injury to the ligaments and muscles, improves the overall efficiency of the motor and a higher level rises stability of locomotion.

The balance is defined as the ability to maintain equilibrium position in certain positions or go with the visual analyzer, proprioceptors and kinesthetic sensations, which is very important in this dance. Maintaining a stable and dynamic balance in acrobatic rock'n'roll-in is closely linked to the corresponding neural mechanisms. Dynamic balance is particularly evident when performing elements such as jumps, turns and acrobatic elements. Condition of emotions and general mental state are considered, sometimes, the decisive factor in the balance.

Acrobatic rock'n'roll requires the highest level of development of motor skills in relation to all the other dancers. The effectiveness of these dancers in training and competition depends on the overall strength, speed strength, endurance strength, overall endurance, speed endurance, agility, coordination, reaction speed, etc. Necessary are common and individual preparation for the dancers. In this dance muscular work is dynamic character, submaximal or maximal intensity. In the training process of these dancers are needed specific preparations for the development of motor skills listed (Kostic, R., 2001).

Cognitive abilities dancers acrobatic rock and roll

Dancing any type of dance, including the acrobatic rock'n'roll dancers perform Extra-curricular elements of movement and the movement to be harmonized with respect to the rhythm, tempo, space, dynamics and partners, so it is considered that for a successful dancer required that certain level of cognitive ability is at a higher level, and this primarily refers to the G-factor "factor perceptual reasoning" compared to some competitors in sports cyclic character.

Choreography in acrobatic rock'n'roll-in associated with thinking and memory. Memorization of precise movements and the movements of the choreography, compliance with a partner requires activation of the thinking process. Here dance movements should be performed in time, space and dynamically correct and consistent with musical accompaniment, which can be achieved only with the full concentration and activation.

Given that this is subordinated to rock'n'roll dance music, which has its own qualities and characteristics, the dancers have to constantly listen, and to understand and adapt to her.

Conative features acrobatic dancers rock and roll

Behavior of dancers in dance and in life in general depends on the conative characteristics (Kostic, R., 2001). Based on available studies of these characteristics can be said that in most studies, there is a positive relationship between physical fitness and emotional health. McKinney, in 1939 (after Kane, EJ, 1984) lists the following values of the game, which can be applied and the dancing: increasing social balance and spontaneity, develops independence, relieves tension, provides the basis for friendship.

Active participation in any form of physical activity is associated with emotional health and behaviors that are socially acceptable. Acrobatic rock'n'roll diversity of its facilities contributes to a good mood, stimulate or soothe emotions, affects the development of various social values, provides a sense of freedom, contributes to the development of artistic experience and as such enriching human culture. Acrobatic rock'n'roll dancing is an activity that connects art and sport and thus contributes to the artistic, musical and aesthetic upgrades. It means exhausting and difficult exercises, in addition to developing the ability to control movement in space, require coordination and all kinds of forces, as well as other motor abilities, and certainly develop courage and self-control in these dancers.

Sociological characteristics dancers acrobatic rock and roll

Dance belongs to one of the first ways of interpersonal communication with people and with nature and represents the first sociological form of behavior. For acrobatic rock'n'roll can be said to have a positive impact that is visible in the socialization and emotional sense. The dancers of the dance are the actors certain social environment, because they do not dance just for ourselves, but for the community in which they live.

Physical preparation dancers acrobatic rock and roll

Under the basic physical preparation of athletes, including the acrobatic dancers rock'n'roll, most often means that part of the training which is aimed at the development and transformation of functional, motor and morphological characteristics. Good physical preparation includes optimal nivi submission of all components of the energy and IT workload, thereby reducing the risk of injury and ensures quick and efficient recovery after load.

Adequate physical fitness as a function performed acrobatic rock'n'roll includes posture, good mobility of joints and joint systems, good coordination, and strength of all muscle groups and all forms of strength and balance, speed and endurance. Because physical preparation of these dancers must be focused on the development of motor skills such as coordination, strength, flexibility, speed, balance, and given the long duration and extent of training on specific endurance.

4. CONCLUSION

Acrobatic rock'n'roll by its structure is very complex sport that involves the entire locomotor system, consisting of a series of acyclic movements. As the sport to a harmonious and comprehensive development of organs and organ systems of the entire body. It has a positive impact that their movements to the growth and development of anthropological characteristics. It can contribute to desirable changes and improvement in all segments of the motor, functional and cognitive abilities, as well as morphological characteristics, but also the positive impact that is visible in the socialization and emotional sense.

As the literature in this area is very poor and inaccessible, this work of anthropological characteristics of acrobatic rock'n'roll dancers, represents an interesting area for further research and study.

It can be said that the contribution of this paper is that it encourages necessarily to other research projects in which they are perceived by them and studied all aspects that condition the sport result in acrobatic rock'n'roll-in.

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