

СЕКЦІЯ «ІННОВАЦІЙНІ ТА ЦИФРОВІ ТЕХНОЛОГІЇ ФІЗИЧНОГО ВИХОВАННЯ І СПОРТУ ДЛЯ ОРГАНІЗАЦІ ПЕДАГОГІЧНОГО ПРОЦЕСУ ЗВО»

УДК 796.412

Atamanyuk S.¹, Kyselovicova O.²

¹ D-r Ped. Sc., Professor National University «Zaporizhzhia Polytechnic»

² University in Bratislava, Slovakia Faculty of Physical Education and Sports
Chairman - Department of Gymnastics, Dance, Fitness

THEORETICAL AND METHODOLOGICAL PRINCIPLES OF AEROBIC GYMNASTICS AS A TYPE OF SPORT

Abstract. Aerobic gymnastics as a discipline, developing under the auspices of the International Gymnastics Federation, over the past decades has demonstrated a dynamic increase in competitive complexity, intensification of technical and coordination actions and increased requirements for the functional fitness of athletes. Modern trends in the development of aerobic gymnastics are characterized by a complication of the structure of competitive programs, as well as an increase in the intensity of performing exercises in combination with high coordination requirements and the improvement of judging criteria and the integration of innovative approaches to the long-term training of athletes. Despite the growing popularity of aerobic gymnastics, the issues of its structural and functional specificity and place in the system of gymnastic disciplines remain insufficiently generalized. This necessitates the need for a comprehensive analysis of the features of aerobic gymnastics as an independent sports discipline.

Key words: Aerobic gymnastics, sports discipline, competitive activity, coordination complexity, training process

Анотація. Аеробна гімнастика як дисципліна, що розвивається під егідою Міжнародної федерації гімнастики, упродовж останніх десятиліть демонструє динамічне зростання змагальної складності, інтенсифікацію техніко-координаційних дій та підвищення вимог до функціональної підготовленості спортсменів. Сучасні тенденції розвитку аеробної гімнастики характеризується ускладненням структури змагальних програм, також підвищенням інтенсивності виконання вправ у поєднанні з високими координаційними вимогами та удосконаленням критеріїв суддівства і інтеграцією інноваційних підходів до багаторічної підготовки спортсменів. Незважаючи на зростання популярності аеробної гімнастики, питання її структурно-функціональної специфіки та місця у системі гімнастичних дисциплін залишаються недостатньо узагальненими. Це обумовлює необхідність комплексного аналізу особливостей аеробної гімнастики як самостійної спортивної дисципліни.

Ключові слова: Аеробна гімнастика, спортивна дисципліна, змагальна діяльність, координаційна складність, тренувальний процес.

Introduction. Aerobic gymnastics as a discipline cultivated under the auspices of the International Gymnastics Federation is characterized by high intensity of exercise performance, complex coordination of the structure of movements and a combination of power, speed and endurance components within short-term competitive programs. The growth of technical complexity and increased requirements for the quality of performance of elements necessitate a scientific understanding of the specifics of aerobic gymnastics as an independent sports discipline.

The purpose of the study is to determine the features and specifics of aerobic gymnastics as a sports discipline based on the analysis of its structural, functional and methodological characteristics.

Research methods: analysis and generalization of scientific and methodological literature; analysis of regulatory documents and competition rules; comparative analysis of the structure of competitive activity; systematization of theoretical provisions.

During the theoretical analysis, it was established that aerobic gymnastics as a discipline operating in the system of the International Gymnastics Federation has a clearly regulated structure of competitive activity, which combines the continuity of movements without long pauses for recovery, which causes increased requirements for the functional training of athletes.

Analysis of the structure of exercises showed that the basis of competitive activity is basic aerobic steps combined with elements of complexity (static strength, dynamic strength, jumps, balance and flexibility), which are integrated into a holistic composition with musical accompaniment. An important feature is the synchronization of movements with the musical rhythm, which necessitates the need for a high level of rhythmic coordination and spatial accuracy.

It was determined that the energy supply of competitive activity is of a mixed nature with a predominance of the anaerobic-glycolytic component against the background of significant aerobic support. This causes a combination of requirements for speed-strength qualities and special endurance. Along with this, the high intensity of the exercises causes significant loads on the cardiovascular and neuromuscular systems.

Separately, it was established that the system of judging evaluation is based on a comprehensive consideration of complexity, technical quality of execution and artistry, which forms a multi-component model of sports results. Thus, performance in aerobic gymnastics is determined not only by the level of physical fitness, but also by coordination perfection, program structure and expressiveness of execution.

The results obtained indicate the complex nature of competitive activity in aerobic gymnastics, which requires the integration of physical, technical,

coordination and artistic training. The specificity of the sport determines the need for a differentiated approach to planning the training process, taking into account the intensity of the load and the coordination complexity of the exercises.

Systematization of the features of aerobic gymnastics allows us to study its place in the structure of modern disciplines and to substantiate the directions of further scientific research.

Conclusions:

1. Aerobic gymnastics is an independent sports discipline with a pronounced coordination and intensive specificity of the performance of competitive compositions.

2. Competitive activity is characterized by high motor activity and a mixed mechanism of energy supply.

3. A feature of the structure of competitive programs is the need for an integrated approach to the training of athletes.

4. Further research should be aimed at deepening the theoretical and methodological foundations of long-term training in aerobic gymnastics.

REFERENCES

1. International Gymnastics Federation. Code of Points: Aerobic Gymnastics 2025-2028. Federation Internationale de Gymnastique. 2024.

2. Atamanyuk, S. Kubatko A., Kuruchenko O., Zhuravlev Y. Features of the functional state of athletes in sports aerobics during the development of special endurance, taking into account the characteristics of the female body. International Journal of Physical Education, Sports and Health, India, 2025, №12 (3 F), Pp. 389-393 <https://doi.org/10.22271/kheljournal.2025.v12.i3f.3823>

3. Bishop, D., Girard, O. & Mendez-Villanueva, A. Repeated – sprint ability – Part II: Recommendations for training. Sport Medicine, 2013. 41(9), 741-756. <https://doi.org/10.21165/11590560-000000000-00000>