

The Influence of Competition Rules on the Difficulty Groups of Aerobics

Jinnan Han

Department of Physical Education, Shanghai Maritime University, Shanghai, China

Abstract: The competition rules are the directional indicators of competitive sports, which not only restrict the direction of sports technology, but also promote the development of sports events. Difficulty movements are an important component of aerobics, determining the level of athletes' competition results, and also one of the important judgments of judges. The selection and use of difficulty action groups for participating athletes should comply with the requirements of the rules. There are a total of four difficulty groups in aerobics. In competition statistics, Group C has the highest usage rate of nearly 50% among the four groups, while Group B has the least number of difficulty choices and a relatively single difficulty type. Considering the adjustment of one's own set of difficulty groups based on the opponent's strength, the athlete's performance system during the competition exhibits a three-dimensional, open, fluctuating, and multivariate complex control system.

Keywords: Aerobics; Competition Rules; Difficulty Group.

1. Introduction

In terms of difficulty and risk, there is limited research literature. Any competitive sports should not only pursue high difficulty, but also reduce the risk of failure to ensure the normal performance of the competition. High level athletes in competitive aerobics should also reduce the failure rate of difficulty while pursuing high risk and high difficulty.

Wang Hong and Liu Xiaojing proposed in "The Difficulty Characteristics of Winning Complete Sets of Actions in World High Level Competitive Aerobics" that there is a clear correlation between difficulty actions and the final ranking of results. The higher the difficulty score, the greater the likelihood of ranking high, and the more detailed and significant the rules require difficulty actions. Rank the top 3 difficulty actions of each individual event at the 2014 World Championships in a sequence based on the completion risk. Combine the structure of the complete set of actions with the content of the complete set to form a series of action combinations, divide the entire set into several structural paragraphs, and evaluate the distribution characteristics of the risk of different winning routines in each individual event of aerobics. Analysis shows that among the risk factors of each individual winning set of content, the difficulty action factor has the highest proportion, with an average of 61.3%.

Lu Fuxiang proposed in his research on the risk structure layout characteristics of complete sets of movements in competitive aerobics that risk objectivity refers to the possibility of losses in human life. The complete set of aerobics content consists of multiple parts, and the more difficult the technique of action fairy rhymes is, the greater the risk of completion. How to reasonably layout the complete set of content is a key factor in grasping the higher success rate of complete sets of content. Before creating a complete set of content, it is necessary to calculate the risk level of the individual content in a reasonable manner. Single person projects should try to place the highest risk paragraph content in the first paragraph, with descending characteristics as the main focus. The risk structure layout of each individual item's complete set of content varies, but the higher the risk, the complete set of content should be completed with sufficient

physical strength to improve the success rate.

Jin Wenlei proposed in his research on the difficulty combination of complete sets of movements in competitive aerobics collective projects that the increase in the use of combination difficulty is an inevitable trend. After the implementation of the new cycle rules on the difficulty combination method and score changes, the number of uses of two connection difficulty combinations has decreased, and the number of three connection difficulty combinations has significantly increased, the selection of spatial variations in the difficulty combinations of the three collective projects is relatively balanced. In terms of the difference in risk scores between two difficulty combinations, both three person and five person exercises had higher risk scores for the first time, while mixed doubles had slightly higher risk scores for the second difficulty combination.

In summary, there is relatively little research on the difficulty and risk level of competitive aerobics. Any competitive sports have a risk level, and the greater the difficulty, the higher the risk level of competition, and the possibility of failure will increase. However, competitive sports need to constantly break through and break existing records. High level athletes of competitive aerobics, while pursuing high risk and difficulty, reasonably allocate difficulty actions in the positions of the complete set of actions to reduce the failure rate of difficulty.

2. Organization of the Text

2.1. Analysis of the Risk of Difficulty Actions

Competitive sports are a time activity that encourages and punishes risk-taking. How to grasp the risk of the highest difficulty movements in competitive aerobics is a core issue that high-level aerobics teams around the world have been striving to practice.

2.1.1. Risk Analysis of Each Individual Difficulty Action

The difficulty actions in the winning sets of the top 8 in the 15th World Aerobics single event are converted based on the risk index of the pre-designed difficulty actions, and the difficulty actions are divided into a 5-point evaluation system. The risk levels are divided into high, medium, and low.

Convert the scores of difficulty actions as follows and evaluate the difficulty risk index of each individual item.

Table 1. Comparison of difficulty and risk levels of each item in the 15th edition

Risk index							
	Risk level	5 High	4 Medium	3 Low	2	1	
State		1.0;0.9	0.8;0.7	0.6;0.5	0.4;0.3	-	Risk score
Men		37	36	7	-	-	351
Women		8	41	31	-	-	296
Mix		6	36	30	-	-	264
Three		17	33	22	-	-	280
Five		9	39	24	-	-	273
Total		77	185	114	-	-	1463

From Table 1, it can be seen that according to the risk level of high, medium, and low, the corresponding risk index is 5 points, 4 points, 3 points, 2 points, and 1 point. In the 15th World Championships, except for individual events, there were 9 difficulty actions in the complete set, so the difficulty risk score of individual events will be higher than that of collective events. Through statistical analysis, it was found that in the 15th edition of each individual event, the high risk level was 1.0; A total of 77 difficulty levels are used in the 0.9 interval; At a medium risk level of 0.8; 0.7 interval, using a total of 185 difficulty levels, at a low risk level of 0.6; In the 0.5 interval, a total of 114 difficulty levels were used, and fuzzy mathematics was used to statistically analyze the difficulty actions with high, medium, and low risk levels, presenting a 1:2:1 feature.

The difficulty actions with high, medium, and low risk levels in men's singles exhibit a 5:5:1 characteristic; The high, medium, and low difficulty movements in women's singles projects exhibit a 1:5:4 characteristic; The high, medium, and low difficulty movements in mixed doubles show a 1:6:5 characteristic; The high, medium, and low difficulty movements of the three person project exhibit a 2:4:3 characteristic; The high, medium, and low difficulty movements of the five person project exhibit a 1:4:3 characteristic.

Only the difficulty and risk of selecting male singles projects show high and medium characteristics, while the risk of selecting other single projects mainly shows medium and low characteristics.

2.2. The Distribution of Difficulty Risk in the Complete Set of Paragraphs

Each set is divided into three sections based on the number of eight beats of the set, namely the front, middle, and back sections. The distribution of difficulty actions in the set has an impact on the overall arrangement of the set and the quality and success rate of completing the difficulty. As the set time increases, the athlete's physical fitness will gradually decrease. Therefore, different difficulty actions should be allocated in different sections based on the athlete's own physical characteristics; On the other hand, attention should also be paid to the layout and balance of the arrangement of difficult

movements to avoid the phenomenon of accumulation or excessive dispersion of difficult movements. According to the research on the distribution of difficulty risk of each section in the 15th edition of each individual set, the difficulty risk of each section shows a gradual decreasing trend. The distribution of difficulty risk of each section is more reasonable, which can better allocate physical energy and effectively complete difficult actions in the set to improve the quality of completion.

3. Conclusion

This paper has discussed and analyzed three main aspects of the National Fitness Plan (2016-2020), the optimization of the aerobics curriculum in colleges and universities, and teaching dilemmas to understand the development direction of the National Fitness Plan in China through the interpretation of the National Fitness Policy. Aerobics is loved by the masses because of its simplicity, easy to learn, low requirements for venues, easy to promote to adapt to a wide range of groups and other factors, from easy to difficult choreography and teaching content classification settings according to the type of participants, for example, for college students and younger groups, teachers can choreograph more dance elements, such as street dance, jazz, pop dance, break dance and other dances to attract students' interest in learning and enhance the youth's aesthetic awareness. While facing older groups, teachers can add more elements of square dance on the basis of general mass aerobics to ensure a suitable exercise style for different groups and achieve the purpose of fitness.

References

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