Kumushoy Nazarova
Doctoral student of Uzbekistan State University of Physical Education and Sports, Uzbekistan

QUESTIONNAIRE AS A METHOD FOR DETERMINING THE ROLE AND IMPORTANCE OF STRETCHING EXERCISES IN THE DEVELOPMENT OF FLEXIBILITY IN RHYTHMIC GYMNASTICS

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Annotation. This article was conducted using a survey method to determine the role and importance of stretching exercises in the development of flexibility in rhythmic gymnastics, as well as the amount of time allocated for the development of flexibility in young artistic gymnasts. The article describes the key stages of developing and implementing the questionnaire, as well as methods for analyzing the collected data. The results and conclusions of the study can help improve training programs and increase the effectiveness of training young gymnasts.

Key words: stretching exercises, flexibility, rhythmic gymnastics, young gymnasts, questioning, training process, physical qualities.

Introduction.

The development of physical qualities, especially flexibility, in rhythmic gymnastics is still relevant today. Research conducted both in domestic and foreign science confirms that this problem is being widely studied. In this regard, this problem was studied by such scientists as O.P.Vlasova, I.A.Viner, L.A.Karpenko, S.N.Vlasenko, K.D.Yarashev, M.N.Umarov, S.V.Fedorova etc. Questioning, in turn, is one of the most suitable and effective methods for studying this problem and achieving the goal. It allows you to cover a wide range of issues and attract many respondents, which helps to obtain more objective data. When developing the questionnaire, we were based on the research of B.A.Ashmarin, F.A.Kerimov, I.F.Devyatko, V.A.Yadov and others.

Research methods.

Theoretical analysis and synthesis of specialized literature; survey; methods of mathematical statistics.

Organization of the research.

The survey was conducted among rhythmic gymnastics trainers with significant experience in this field. When compiling and organizing the survey, methodological and methodological principles for constructing questionnaires were used, which are described in detail in the works of B.A.Ashmarina, I.F.Devyatko, F.A.Kerimov.

The questionnaire consists of three parts: introductory,

The questionnaire consists of three parts: introductory, main and final. It contains questions ranging from:

a) form (direct and indirect questions, questions with a fan of answers, open, closed, semi-closed questions, trap questions);

b) functions (control questions, filtering);

c) content (questions about motives, questions about facts, demographic questions, etc.).

The questionnaire included 20 questions, as well as a demographic part, in which the trainer indicated age, type of sport, and sports qualifications, in order to analyze the data obtained from various angles.

Based on the results of the questionnaire, it turned out that among all the coaches interviewed, when asked: "At what age do you think it is better to start doing rhythmic gymnastics?" 43.3% answered from 4 years old, 40% from 5 years old, 10% of respondents answered from 3 years old and 6.7% answered from 6 years old.

And also to the question: "How do you assess the role of flexibility for girls involved in rhythmic gymnastics?" 56.6% of respondents answered very important because flexibility helps to perform complex movements and prevent injuries, 30% believe that

flexibility is important but not critical, 10% have a neutral opinion, they believe flexibility does not play a key role in rhythmic gymnastics, 3.3% answered that others aspects are more important than flexibility in a given sport.

Let's consider the answers received to the following question: "What is the most favorable age for developing flexibility in rhythmic gymnastics?" 50% of respondents answered – 3-6 years; 30% of respondents said 7-12 years; 6.7% selected 13-15 years; 13.3% believe that there is no specific age, flexibility is important at all stages of an athlete's development.

Further to the question: "What basic methods of developing flexibility in rhythmic gymnastics do you know?" 90% of trainers responded that specific training programs, including elements of flexibility and strength; 6.7% responded with stretching exercises using gymnastic devices; and only 3.3% chose dynamic exercises to increase flexibility.

We also asked, "What methods are used to develop flexibility?" To this question, the majority of 66.7% of coaches answered all of the above options; 26.6% chose the option of static and dynamic stretching; and 6.7% chose the multiple stretch method.

To the question: "What methods and means are most effective for developing flexibility?" 50% of respondents responded with systematic stretching and flexibility exercises, including specialized poses and movements; 26.6% chose the option of integrating elements of active and passive stretching into the training program; 16.7% responded using specific gymnastic elements aimed at improving flexibility and mobility of the body; and only 6.7% chose the answer: practice of exercises aimed at developing flexibility in key areas for performing complex elements of rhythmic gymnastics.

Let's examine the responses to the question: "When is the best time to perform flexibility exercises in rhythmic gymnastics?" 53.3% of respondents answered that these exercises are best done at the beginning of the training session, after the general warm-up, to prepare the body for physical exertion. 23.3% answered that flexibility exercises are best done after the main part of the workout to improve flexibility in various muscle groups. 16.7% chose the option of doing flexibility exercises during the workout, between the execution of complex elements, to maintain mobility and prevent injuries. Only 6.7% of respondents chose the option of doing flexibility exercises at the end of the workout, as part of the cool-down routine, to reduce muscle tension.

Next, to the question: "What percentage of your time do you think is appropriate to devote to developing student flexibility?" the majority of 66.7% of coaches answered this question depending on the individual needs and level of each athlete; 20% answered approximately 20-30% of the training time; 13.3% consider 40-50% of the time to achieve high flexibility.

Next, consider the answers to the following question: "Duration of exercises to develop flexibility?" the majority of 73.3% of trainers answered approximately 20-30 minutes including various poses and stretches; 16.7% responded between 10 and 15 minutes during the initial phase of training; and 10% chose the option of 30 minutes during the workout.

I was also interested in, "Do trainers use tools and methods to monitor the level of flexibility development?" 50% responded We have special programs and flexibility tests to evaluate results; 33.3% answered no, we do not use systematic methods to control the level of flexibility; 10% chose the option we use questionnaires and assessments of athletes' well-being regarding flexibility; and 6.7% responded We regularly perform flexibility tests such as range of motion measurements.

To the question of the questionnaire: "What difficulties do you experience when performing stretching exercises?" 60% responded with a lack of flexibility in certain muscle groups, making it difficult to perform

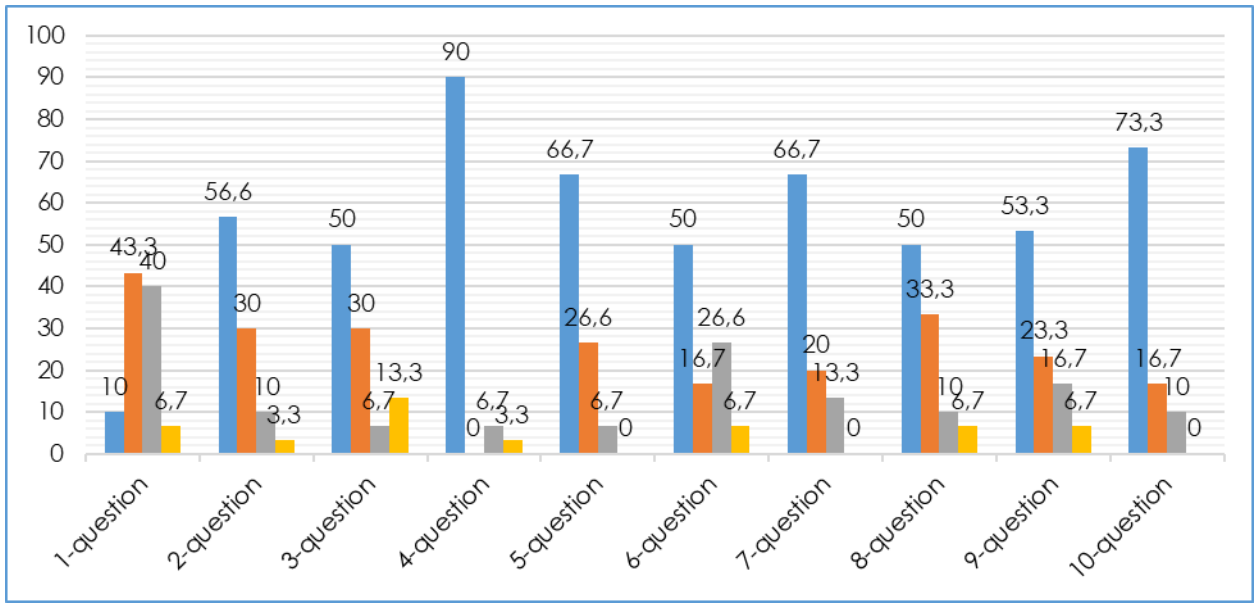

Fig.1 Results of questionnaire survey 1-10 questions in percentage

a full range of motion; 20% chose the option of muscle pain when stretched, especially at the beginning of training; 13.3% find it difficult to maintain proper exercise technique, especially with complex stretches; and 6.7% responded that lack of time or motivation to practice stretching regularly makes it difficult to achieve sustainable results.

Among all respondents to the question, "Which part of the body should flexibility exercises begin with?" 3.3% answered that they should start with exercises for the lower back and lumbar region; 16.7% of respondents believe that flexibility exercises should begin with the lower limbs, such as the thighs and calves; 36.7% responded that flexibility exercises should start with the upper body, including the shoulders and neck; and 43.3% answered that there is no specific preferred order and that exercises can start with any part of the body depending on the needs and goals of the training.

Next, consider the answers to the question: "What do you understand by the term "stretching"? more than half of the respondents 66.7% answered Stretching is a set of stretching and flexibility exercises; 10% answered this is a method of exercises aimed at improving body mobility; 13.3% stretching includes stretching muscles to improve their elasticity; 10% stretch is a systematic stretch to improve flexibility and reduce the risk of injury.

The next question was: "What stretching exercises do you often use in your training process?" 6.7% answered stretching the flexibility of the spine; 10% hip and shoulder stretch; 40% responded with exercises to improve flexibility and elasticity of the back; 43.3% responded with yoga poses specific to rhythmic gymnastics.

Let's consider the answers to the following equally important question: "What changes in the flexibility of gymnasts did you notice after the introduction of stretching into the training program?" 16.7% responded: gymnasts began to perform complex elements with greater ease and smoothness of movements; half 50% of respondents responded that the gymnasts' flexibility had improved significantly, which helped them deepen some elements in rhythmic gymnastics; 33.3% responded that stretching helped reduce tension and fatigue in the muscles after intense training; 16.7% noticed that gymnasts maintain balance and control movements better due to improved flexibility.

To the survey question, "How often do you use stretching exercises to develop flexibility?" 83.3% answered every day to maintain a high level of flexibility; 3.3% con-

sider doing it 3-4 times a week to improve flexibility and prevent muscle tension; 6.7% said it depends on the training program, doing it twice a week to maintain optimal flexibility; and 6.7% responded that it varies based on individual needs and training load, for example, after intense workouts or during periods of active recovery.

Next, let's examine the responses to the question: "How do stretching exercises affect the development of flexibility?" The answers were as follows: 10% of respondents believe that stretching exercises contribute to improving the flexibility of muscles and

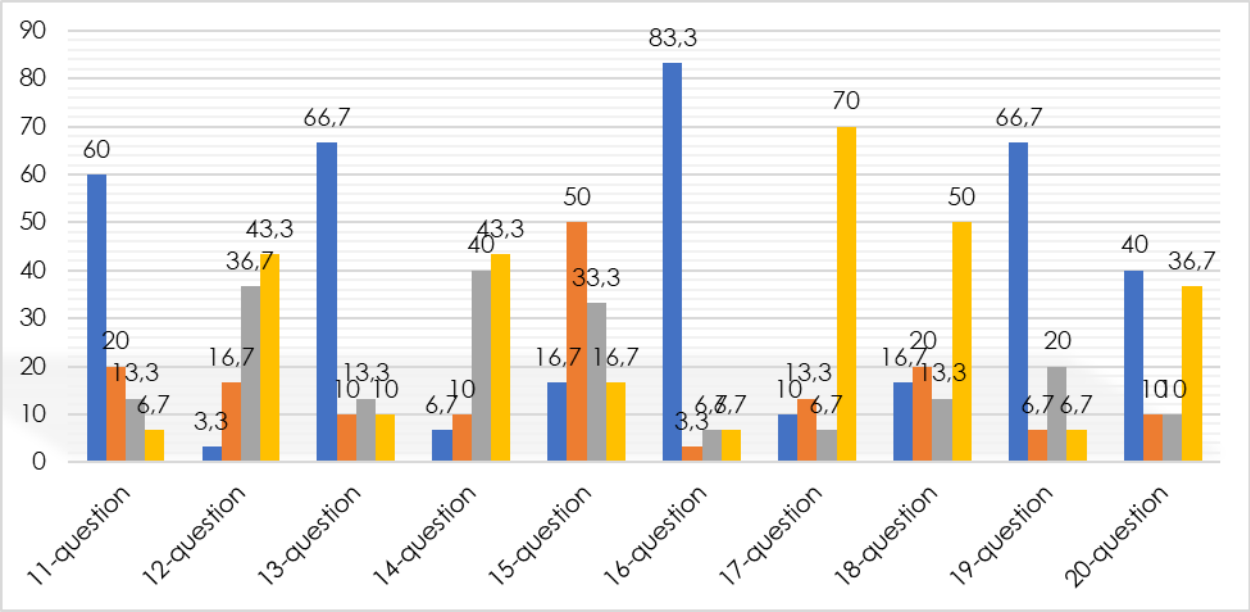

Fig.2 Results of questionnaire survey 11-20 questions in percentage

joints through stretching and relaxation; 13.3% stated that the effectiveness of stretching exercises in developing flexibility depends on proper execution and regular practice; 6.7% think that the results of stretching exercises can be individual, depending on the initial level of flexibility and physical fitness; and 70% believe that, in addition to increasing flexibility, stretching also helps improve blood circulation and reduce the risk of muscle injuries.

To the next question of the questionnaire: "Which types of stretching exercises are most effective for developing flexibility?" the responses were as follows: 16.7% indicated that static stretching, particularly holding a stretch for 20-30 seconds, helps gradually improve flexibility; 20% responded that dynamic stretching, such as controlled movements, enhances flexibility through active stretching and muscle contraction; 13.3% mentioned PNF (Proprioceptive Neuromuscular Facilitation) methods, including relaxation-stretching and contraction-stretching techniques, which are effective for achieving deep stretches and increasing flexibility; and half of the respondents (50%) stated that exercises from yoga and Pilates, focusing on stretching and strength aspects, contribute to the comprehensive development of flexibility and muscle coordination.

Next, to the next question: "What stretching exercises are advisable to use in the initial training groups in rhythmic gymnastics?" 66.7% answered leg stretching: while sitting on the floor, children can bend over their legs or reach for their feet; 6.7% stretching of arms and shoulders: for example, cross grips of arms behind the back; 20% back stretch: half squats with arms up or side bends; and 6.7% stretching of the neck and torso: turning the head and bending forward.

Let's examine the responses to the question: "How do the stretching exercises used for beginner groups differ from those used in training groups in rhythmic gymnastics?" 40% of respondents stated that exercises for beginner groups are usually simpler and

aimed at developing basic flexibility and coordination; 10% answered that training groups use more complex and intensive exercises to develop athletic flexibility and strength; another 10% noted that exercises in beginner groups may be less intense and have a smaller range of motion compared to those for training groups; and 36.7% indicated that training groups often incorporate specialized exercises to prepare for performing complex elements in rhythmic gymnastics.

Conclusion.

As a result of a survey aimed at determining the role and importance of stretching exercises in the development of flexibility among young gymnasts in rhythmic gymnastics, important data were obtained on the perception and application of various stretching techniques among gymnasts. The majority of respondents confirmed that regular stretching helps improve flexibility and overall physical condition, which in turn has a positive effect on their athletic performance and well-being.

The results obtained highlight the importance of integrating stretching into the training process for gymnasts, which can help not only in developing flexibility but also in preventing injuries. A correlation was also identified between the level of flexibility and the execution of technical elements, emphasizing the necessity of including stretching in regular training programs. An important aspect is that respondents noted the positive impact of stretching on psychological well-being, contributing to reduced stress and increased self-confidence.

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