

TEACHERS PERCEPTIONS ON THE IMPACT OF AQUA-FITNESS ON THE PSYCHOMOTOR AND FUNCTIONAL PREPARATION OF SECONDARY SCHOOL STUDENTS - AN INVESTIGATIVE DESIGN

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Abstract: In the context of physical education, aqua-fitness is an effective method that can significantly contribute to the psychomotor and functional development of secondary school students. This study investigates the perceptions of physical education teachers and coaches on the impact of aqua-fitness in physical education classes, assessing the effects on students' motor skills, general health and physical fitness. Hypothesis: It is hypothesized that the implementation of aqua-fitness activity in physical education classes in secondary school contributes significantly to the improvement of students' psychomotor and functional readiness, being favorably perceived by teachers as an effective method of developing their motor skills and general health. The aim of this study is to analyze the perceptions of secondary school, high school and sports club teachers on the impact of aqua-fitness on the psychomotor and functional development of students, as well as to identify the potential benefits of this activity in physical education. Objectives of the study: To assess the teachers' opinion on the effectiveness of aqua-fitness in the psychomotor development of pupils. To identify physical activities recommended by teachers for students' psychomotor development. To analyze teachers' perception of the need to introduce aqua-fitness lessons in the school curriculum. The results obtained from the questionnaire applied to 102 teachers provide an insight into the effectiveness of this activity and the possibilities of integrating it into the school curriculum.

Introduction: In the context of modern physical education, the diversification of instructional-educational methods is essential for the physical and psychomotor development of students, especially during adolescence. Aqua-fitness, a form of physical exercise carried out in water, has become increasingly popular due to its benefits on physical and psychological health, being considered an accessible and effective activity for the development of motor skills [13]. The present study aims to explore the impact of aqua-fitness on the psychomotor and functional readiness of secondary school students by analyzing the perceptions of physical

education teachers and coaches. Although much research, such as that conducted by study [4], highlights the benefits of social and emotional learning initiatives for students, there is still little information about the attitudes of Irish post-primary educators in this regard. Sport is recognized as an effective means of maintaining physical health and emotional balance, and motivation is the foundation of all sporting achievement [12]. Water gymnastics has become increasingly popular, a phenomenon influenced by the growing interest in recreational and therapeutic activities carried out in the swimming pool [13]. The literature, such as the study by [11], has examined the optimal conditions for the organization of aqua fitness classes, highlighting the benefits of this form of exercise on physical and mental health. In a context of rapidly advancing technology, the question arises whether the mentality of teachers can positively influence the instructional-educational process and whether it can be changed to improve the educational act [7]. The COVID-19 pandemic has accelerated innovations in information technology, integrating it into the daily life of most people [8]. Sports games have always been attractive activities for secondary school students, playing an important role in the development of motor and social skills [2]. Also, studies conducted by [1] have demonstrated the effectiveness of elements of classical ballet and dance sports, such as cha-cha or slow waltz steps, in optimizing flexibility in 10-11 year old children. Physical education and sport are integrated into the curricula from primary school to university, fulfilling multiple functions in the instructional-educational process [3]. Sport, considered to be one of the most dynamic social activities, aims to develop and improve the individual, justifying the regular analysis of trends in the field [5].

Material-method: To carry out this study, we developed a questionnaire consisting of 6 questions addressed to physical education teachers in middle schools, high schools and clubs, aiming to assess the psychomotor and functional readiness of students through aqua-fitness activity. The questionnaire was distributed between April and May 2024, and the responses from 102 teachers were collected and analyzed to identify their perceptions of the effectiveness of this type of physical activity. Inclusion criteria: physical education teachers, active in middle school, high school and sports clubs; willingness to respond to the questionnaire; participants' prior consent to complete the questionnaire, ensuring data confidentiality and its use for scientific purposes only. The participants were informed about the objectives of the research and how their answers would be used, respecting the ethical principles of the research. Research methods: literature and scientific article method, questionnaire survey method, questionnaire analysis and interpretation method and graphical method. Hypothesis: It is assumed that the implementation of aqua-fitness activity in physical education classes in secondary school contributes significantly to the improvement of psychomotor and functional training of students, being favorably perceived by teachers as an effective activity for the development of motor skills and general health of students. The aim of this study is to analyze the

perceptions of secondary school, high school and sports club teachers on the impact of aqua-fitness on the psychomotor and functional development of students, as well as to identify the potential benefits of this activity in physical education. Objectives of the study: To assess the teachers' opinion on the effectiveness of aqua-fitness in the psychomotor development of pupils. To identify physical activities recommended by teachers for students' psychomotor development. To analyze teachers' perception of the need to introduce aqua-fitness lessons in the school curriculum. The results obtained from the questionnaire applied to a number of teachers provide an insight into the effectiveness of this method and the possibilities of integrating it into the school curriculum.

Results: We will present the results of the questionnaire addressed to 102 physical education teachers and coaches. The questionnaire aimed to assess their perceptions of the impact of aqua-fitness on the psychomotor and functional development of secondary school students. The data collected provide a detailed picture of the teachers' opinions on the effectiveness of this method, as well as on the possible benefits of integrating aqua-fitness into physical education classes. The analysis of the results allows for the identification of major trends and factors perceived as influencing pupils' development through specific physical activities such as aquafitness.

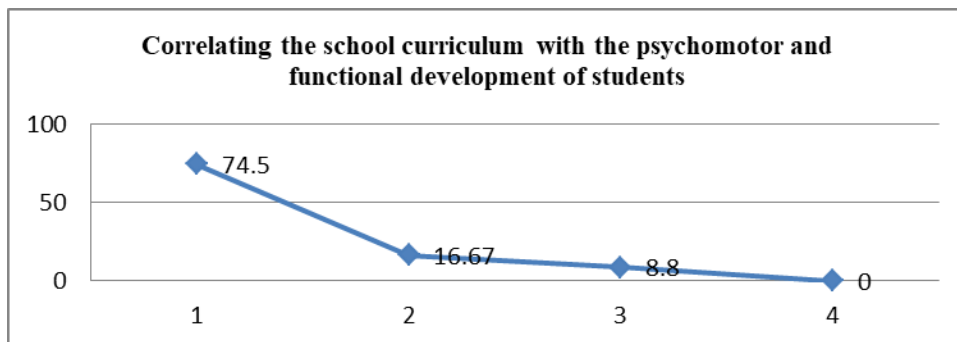


Fig. 1 Corelarea curriculum-ului cu dezvoltarea psihomotrică a elevilor

Based on the results, we can see that the majority of teachers and coaches (74.5%) believe that the curriculum corresponds to 75% of the students' psychomotor and functional development, and a significant 16.67% believe that only 50% corresponds. There is a small number of teachers who consider that the curriculum corresponds fully (8.8%), and no teacher considered that only 25% corresponds.

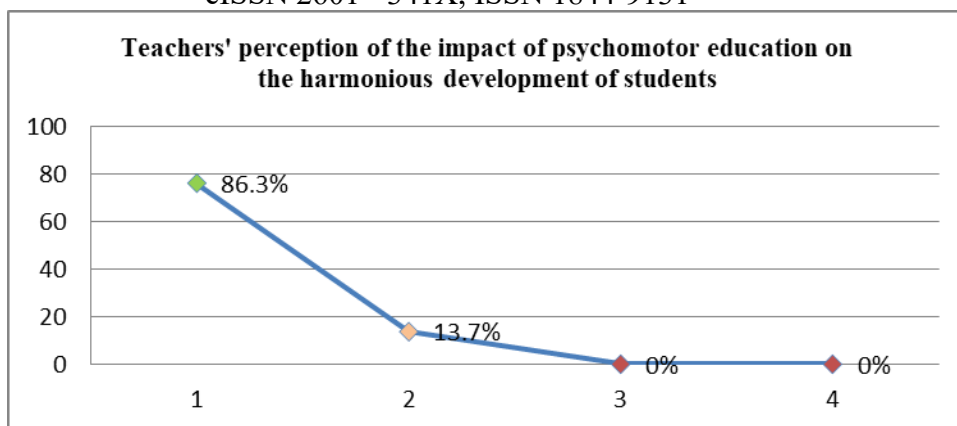


Fig. 2 Educația psihomotrică și dezvoltarea armonioasă a copilului

The majority of teachers (86.3%) agree that psychomotor education supports the harmonious development of secondary school students, indicating a widespread positive perception of this educational component. In the low variant, 14 teachers (13.7%) have a more reserved perception, and in the no/don't know variant, zero teachers, suggesting a general consensus on the importance of psychomotor education.

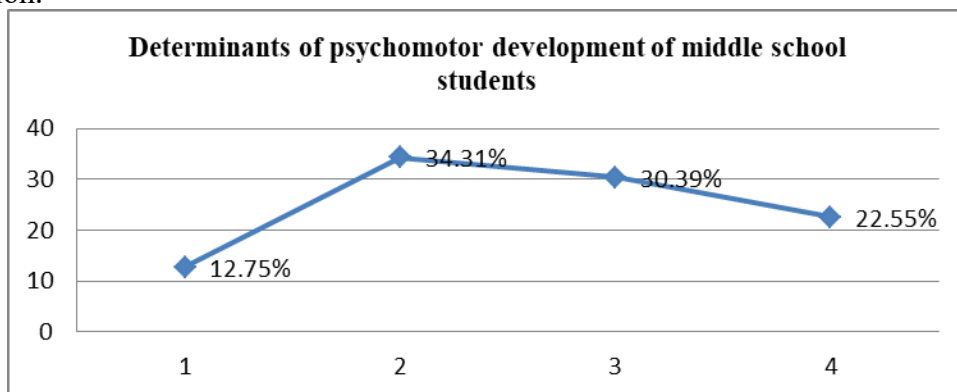


Fig. 3 Factorii care influențează dezvoltarea psihomotrică a elevilor

Predominance of biological and hereditary factors, 34.31% of the teachers consider biological factors as the most influential, 30.39% indicate hereditary factors. There is a perception centered on natural, biological and genetic influences in students' development. 22.55% of the teachers consider physical activities as a major factor. The importance of practical experiences in psychomotor development is considered, but with a lower weight than biological and hereditary factors. Only 12.75% of teachers indicated psychological factors as the most important. It is assumed that the relatively low value may indicate an underestimation of the influence of the mental component in motor development. The general perception of the teachers indicates a greater focus on biological and hereditary factors in psychomotor development. Psychological factors are less recognized, although the

literature highlights their important role. The results suggest the need for a balanced approach, including both motor activities and supporting psychological components in the physical education curriculum.

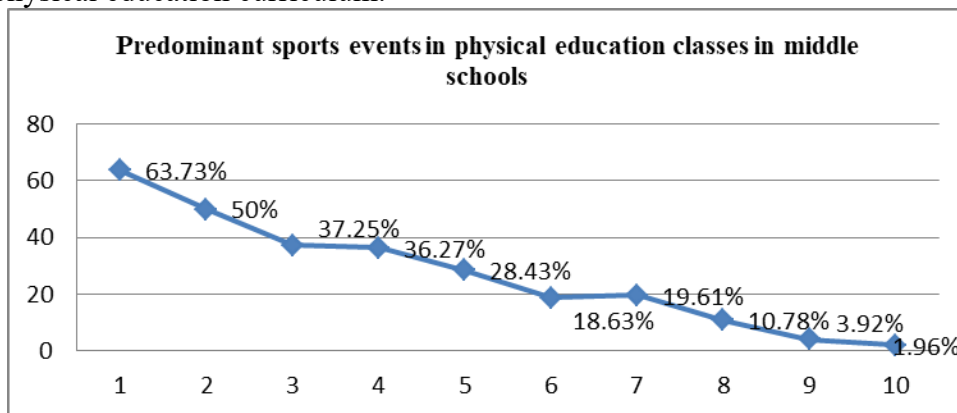


Fig. 4 Probe sportive practicate în orele de educație fizică

Following completion by the 102 teachers, the data were obtained for the question related to the sports events included in the curriculum and their frequency in physical education classes. Each variant represents a percentage indicating the weight of responses for each sport activity, and the percentages total 100%, reflecting the distribution of responses among the 102 teachers who participated in the survey. The highest percentage of the respondents, 63.73%, indicated sprinting as the sport event they most frequently practiced during physical education classes. It is hypothesized that sprint running is a valued and frequently used activity in the school curriculum, perhaps due to its importance in developing endurance and speed in students. A significant percentage of 50% of the teachers indicated throwing as one of the important challenges practiced in physical education classes. Throwing is an activity that contributes to the development of strength and coordination, and is also essential for the development of students' gross motor skills. Jumps were ticked by 37.25% of teachers. These activities are important for the development of muscle strength and mobility and have a direct impact on pupils' coordination and flexibility. Almost 36.3% of the teachers mentioned endurance running as a frequently practiced challenge. Endurance running is essential for improving cardiovascular fitness and increasing physical endurance in students. A percentage of 28.43% of the teachers opted gymnastics as the main activity in physical education classes. Gymnastics is a complete exercise that helps develop balance, strength and coordination, and this makes it a key element in physical education. Football was selected by 18.63% of the teachers, being a quite popular activity in Romanian schools. Football is an activity that helps develop team skills, hand-eye coordination and cardiovascular endurance. Sports games were indicated by 19.61% of the teachers, suggesting that recreational activities and games are an important component of physical education, having a role in stimulating socialization and collaboration among students.

Volleyball was mentioned by 10.78% of teachers. Although not as popular as soccer, volleyball helps develop coordination, balance and fine motor skills. Handball was chosen by only 3.92% of teachers. It is an activity that helps to develop teamwork skills and coordination, but it seems to be less practiced in secondary schools compared to other sports, and tennis was mentioned by only 1.96% of teachers, suggesting that it is a less common activity in PE lessons. Although tennis can develop excellent coordination and quick reflexes, it is an activity that requires more equipment and may be more difficult to implement widely in schools.

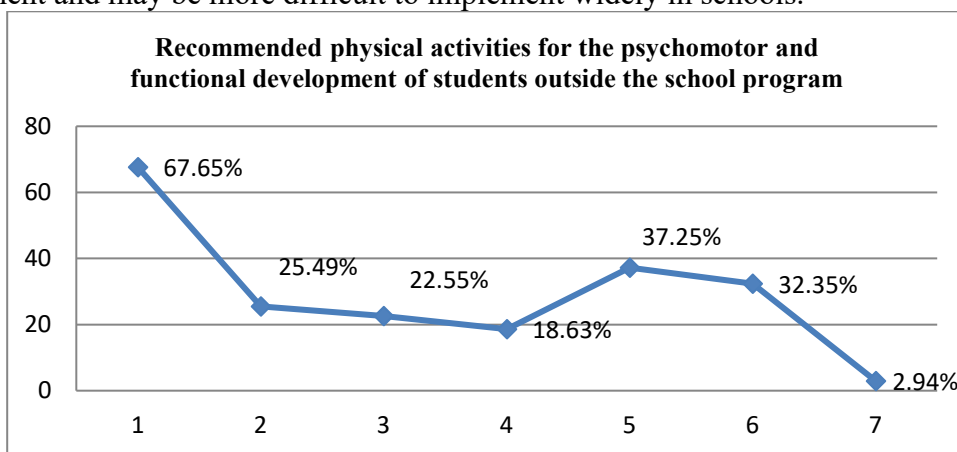


Fig. 5 Activități fizice pentru dezvoltarea psihomotrică a copiilor

Swimming is considered the physical activity most recommended by teachers for the psychomotor and functional development of students, with 67.65% of all responses. It enjoys great popularity due to its multiple benefits: improving breathing capacity, increasing muscle strength and developing motor coordination. It is also an effective exercise for the whole body. Athletics is the second most popular activity among teachers, with 25.49% of them recommending it. Athletics activities, such as running and jumping, are essential for developing endurance, speed and coordination. It is an accessible and effective activity with a positive impact on cardiovascular health and motor development. Gymnastics is also an activity recommended by a significant number of teachers, 22.55%, helping to develop flexibility, muscular strength and coordination. Football is a popular activity, recommended by 18.63% of teachers, for developing motor skills, coordination and team spirit. It helps improve overall fitness, speed and endurance. Aqua-fitness was chosen by 37.25% of the teachers as an activity beneficial for the physical and psychomotor development of pupils. This activity involves water aerobics, which helps to improve endurance, strength and flexibility while reducing the impact on joints. Playing sports is another recommended activity, with 32.35% of teachers considering it important. Options mentioned by teachers in the 'Other' category are less commonly recommended, with only 2.94% of teachers indicating activities not included in the standard options

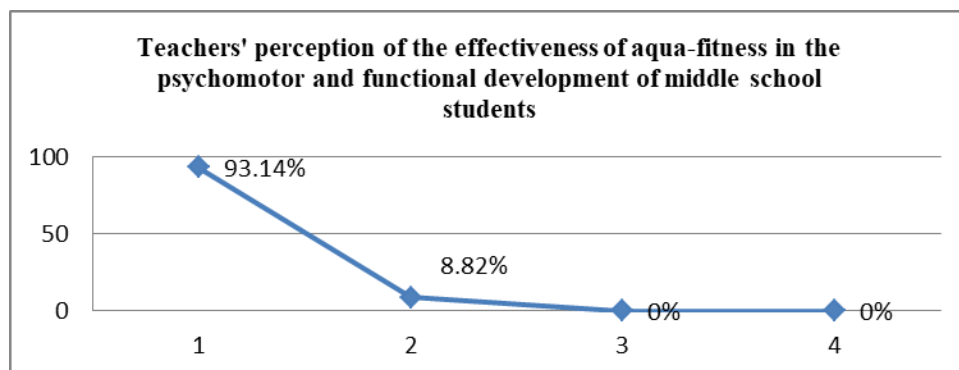


Fig. 6 Percepțiile profesorilor despre eficiența aqua-fitness-ului în dezvoltarea elevilor

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Discussions: In recent studies, researchers have explored the benefits of physical activity on children and young people in a variety of settings, and the results suggest that an active lifestyle that includes daily physical activity is essential for their physical, social and emotional development. These activities should be enjoyable and safe, being integrated into daily life through games, sports and physical education, whether at school, at home or in the community [10]. In a recent study, [9] examined the effects of water aerobics on students' subjective well-being, finding that this activity not only reduced anxiety and stress, but also contributed to a more positive attitude towards life, improving the quality of physical education

lessons through the use of novel equipment. Students reported deeper relaxation and lower levels of stress and depression. Furthermore, the study [6] authors investigated the impact of a 10-week aquafitness program with HIIT on the biological and motor parameters of female students, showing significant improvements in body composition, such as decreased body fat and waist circumference, as well as in balance and flexibility. Thus, aquafitness combined with HIIT proves to be an effective method for improving overall fitness.

Conclusions:

1. The majority of teachers and coaches (91.3%) consider aqua-fitness to be an effective activity for the psychomotor and functional development of students. It suggests a broad agreement and a high level of confidence in the benefits of this activity for the physical and psychological development of pupils.

2. Within the educational curriculum, swimming and aqua-fitness are considered excellent physical activities for the development of coordination, flexibility and muscular strength. These activities are valued for their low impact on the joints and are suitable for pupils, especially in the context of possible physical conditions or limitations.

3. The study emphasizes the need to diversify physical activities in physical education to meet the varied needs of pupils. While traditional activities such as running and gymnastics remain important, aqua-fitness was identified as an effective complementary option that can address aspects of physical development not sufficiently covered by traditional activities.

4. The study shows a major focus by teachers on biological and hereditary factors in students' psychomotor development, while psychological factors are less recognized.

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