

# Harmonious Development of Psychological, Physical, and Emotional Wellness in Students Practicing Judo

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**Abstract:** This study explores the role of judo as a tool for developing the psycho-emotional and physical qualities of children in primary school age (8–12 years). The research applies a systematic and pedagogical approach through a specially designed test battery for evaluating motor and psychological parameters. The data reveal clear advantages in children practicing judo – in terms of motor skills, physical endurance, as well as discipline, motivation, and social behavior. Judo is established not only as a physical activity but also as an educational tool for character building and value formation. The results emphasize the importance of promoting sports activities from an early age and creating a supportive environment for the popularization of judo among parents and institutions.

**Keywords:** wellness, judo, psycho-emotional development, education through sport, social adaptation

**Ключови думи:** уелнес, джудо, психоемоционално развитие, образование чрез спорт, социална адаптация



## INTRODUCTION

It is well known that the foundations of psychophysical and intellectual abilities are laid in early childhood.<sup>1</sup> And it is precisely at this moment that there is a chance to provide the child with ample opportunities for personal self-realization in the future.<sup>2</sup> Physical education and sports are an excellent basis for solving the problem of developing strength, agility, coordination in children, satisfying the need for movement, tactile and psychological communication with adults and peers, for increasing social adaptation, strengthening the emotional-volitional sphere and general physical health.<sup>3</sup>

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<sup>1</sup>Movement 1972.

<sup>2</sup>Antonova et al. 2017; Angelcheva 2023; Dimitrova et al. 2018; Dimitrova, Nesheva 2021, Popova-Dobreva 2023.

<sup>3</sup>Dimitrova, Tomova 2025; Dimitrova et al. 2020; Dimitrova et al. 2021; Donev et al. 2019; Trendafilov, Dimitrova 2013.

Nowadays, digital technologies have become an integral part of human life. In the 21st century, digital technologies have become an integral part of everyday life, changing the approach to the organization of work processes and communications. According to the Organization for Economic Co-

operation and Development (OECD), more than 85 % of the population in developed countries regularly uses the Internet, and smartphone penetration has reached 76 %, respectively, for Bulgaria it is 78.3 % according to the National Statistical Institute (Table 1) [nsi.bg 2024].

**Table 1.** Devices used by individuals to access the Internet (NSI – 06.12.2024)

| Devices                                                                       | 2023   |
|-------------------------------------------------------------------------------|--------|
| Desktop computer                                                              | 20.5 % |
| Laptop                                                                        | 33.5 % |
| Tablet                                                                        | 11.5 % |
| Mobile phone or smartphone                                                    | 78.3 % |
| Another device (e.g. smart TV, video game console, e-book reader, smartwatch) | 7.4 %  |

While expanding socio-economic opportunities, innovations also create new risks. Excessive use of digital devices, especially in childhood, causes deterioration of vision, sleep and mental health. Cyber-bullying (daily use) is a serious problem, especially in the context of increasing dependence on technology and the widespread use of smartphones. Teenagers and children who spend more than 3 hours a day on social networks double the risk of depression.

From a psychological point of view, judo improves attention, concentration and mental abilities, as well as self-esteem and respect for others.<sup>4</sup> It channels aggression, builds self-esteem in a personal and social aspect, encourages the expression of emotions and builds trust.<sup>5</sup>

Since early childhood is characterized by very rapid, unbalanced development, the rich possibilities of judo can lead to the construction of a harmonious system for training the entire organism, which is of great importance not only for the current state, but also for its overall future development and ability to act.<sup>6</sup>

## OBJECTIVE

The aim of this study is to assess the impact of judo training on the psycho-emotional state and physical development and ability of children of primary school age 8 to 12 years.

## METHODS

Participants were Bulgarian children aged 8 to 12, with a balanced gender distribution. Study limitations: As this study is within the objectives of the Heritage BG Scientific Center of Excellence, all experts were recruited through a public announcement. Participants gave informed consent for the publication of their data. The study was conducted from May 2023 to February 2025.

The systematic approach also implies the development of an adequate test battery for sports-pedagogical assessment of the motor and psycho-physical qualities of the individual. For this purpose, two variants of pedagogical research were conducted:

<sup>4</sup> Brian 2008; Garcia, et al. 2009; Kano 2013.

<sup>5</sup> Kawamura, Daigo. 2000; Pelletier et al. 1995.

<sup>6</sup> Parijkova, Hill 1998; Wrisberg, Mead 1983.

**I variant:** in this option, the task was to get an answer to the question of the degree of influence of judo on specific physical qualities depending on the period of their development [Eurofit 1988].

For this purpose, experimental (EG – 36 children) and control (CG – 28 children) groups were created, statistically indistinguishable by their input data.

**II variant:** As the main method of pedagogical research, we used the questionnaire survey. The questionnaire was developed on the basis of a wide range of questions. After an expert assessment by 26 independent physical education teachers, a ranking list was prepared and the questions took the following reduced form:

- ✓ Success in school.
- ✓ What is your favorite subject in school?
- ✓ Who introduced you to judo?
- ✓ Have you encouraged a classmate to do judo? If so, why?
- ✓ Has your physical education teacher ever told you about judo?

The survey was conducted in the period March-April 2024.

For this purpose, 152 children aged 8 to 12 years were surveyed, divided into two groups – judo players (72 children - of which 49 boys and 23 girls)) and non-judo players (80 children – of

which 53 boys and 28 girls). The second group was also used as a control group with respect to the survey questionnaire.

## RESULTS

To evaluate the data and the level of motor abilities of the group of athletes, compared to non-athletes, we had to use a generally accepted battery composed of the following test trials:

1. *Sit-Ups in 30 seconds* - abdominal presses – endurance of the abdominal and thigh muscles.

2. *Sit-and-Reach* - flexibility test (using 15 cm from the level of the feet).

3. *Standing Broad Jump* - long jump - test of explosive strength of the lower extremities.

4. *6 – minute run*, (min) – test of cardiac endurance and lung capacity.

5. *Pushups for chest in 30 seconds* – push-ups – muscular endurance

6. *Shuttle Run 3 x 10 meter* – shuttle with change of direction – measures speed and agility.

The results obtained from the test trials to assess the level of motor abilities of the group of athletes (EG) compared to non-athletes (CG) from the statistical variation analysis of the data are presented in the following table No. 2.

**Table 2.** Average values and variability of the signs characterizing motor abilities.

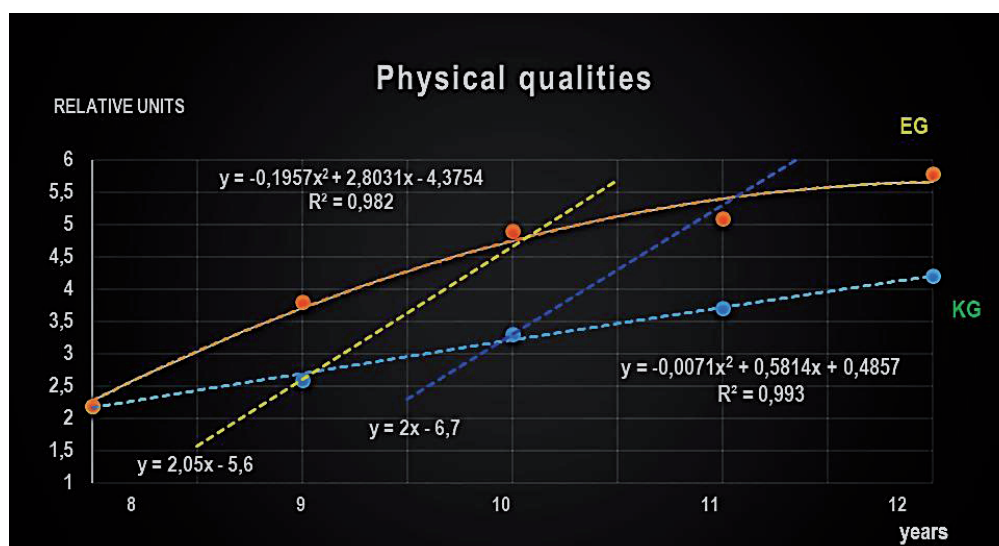
| Indicators                         | Group | $\bar{X}$ | S      | V%    | p      |
|------------------------------------|-------|-----------|--------|-------|--------|
| 1. Sit-Ups in 30 seconds           | CG    | 19.8      | 5,35   | 27,02 | p>0,05 |
|                                    | EG    | 21,35     | 4,89   | 22,9  |        |
| 2. Sit-and-Reach (cm)              | CG    | 2,95      | 1,45   | 49,15 | p>0,05 |
|                                    | EG    | 3,26      | 1,87   | 57,36 |        |
| 3. Standing Broad Jump (cm)        | CG    | 178.25    | 26.12  | 14.65 | p>0,05 |
|                                    | EG    | 180.05    | 17.77  | 9.86  |        |
| 4. 6-minute run, (min)             | CG    | 901.75    | 128.04 | 14.19 | p>0,05 |
|                                    | EG    | 1001.45   | 105.6  | 10.54 |        |
| 5. Pushups for chest in 30 seconds | CG    | 18.35     | 7.32   | 39.89 | p>0,05 |
|                                    | EG    | 19.75     | 6.25   | 31.64 |        |
| 6. Shuttle Run 3 x 10 meter        | CG    | 9.58      | 0.71   | 7.41  | p>0,05 |
|                                    | EG    | 8.47      | 0.6    | 7.08  |        |

The aim of this initial experiment was to track the development of motor potential in both the sports and non-sports groups. Analysis of the level of general physical fitness

assessment showed that participants in the control group (CG) demonstrated significantly lower values in almost all indicators compared to the experimental group (EG).

Despite the differences in mean values, the  $p$  values ( $p > 0.05$ ) indicate that the observed differences are not statistically significant. This may be due to multiple factors, including sample size, training experience of the participants and other individual characteristics, as well as the small age group

of 8–12, which is characterized by undulating development in ontogenesis. The results of the testing of the experimental groups show that the development of motor skills is associated with certain dependencies that can be observed at different stages of the learning and training process.



**Figure 1.** A generalized model for the role of “Upbringing in the formation of physical qualities.

The presence of stages in terms of the improvement of motor structures is also outlined. If we work with the concepts of mathematical modeling, we could formulate saturation zones for each age, with the educational factor playing a role only in reaching them more quickly. Figure 1 presents a generalized model for the role of ‘education in the formation of physical qualities’.

The test battery used at this stage proved successful for the needs of this pilot experiment as it was previously accepted by parents and teachers, whose contingent participated in the study.

**II variant:** Table 3 presents the results of the success of sports and non-sports students. The higher academic success rate of sports children is proven with extremely high statistical reliability (greater than 99 %).

**Table 3.** Athletes / Non-athletes.

| #                | boys     |     |            | girls    |     |            | boys and girls together |     |            |
|------------------|----------|-----|------------|----------|-----|------------|-------------------------|-----|------------|
| Success          | athletes | not | difference | athletes | not | difference | athletes                | not | difference |
| <i>Excellent</i> | 78%      | 17% | 61         | 82%      | 47% | 35         | 79%                     | 34% | 45         |
| <i>Very good</i> | 13%      | 30% | -17        | 18%      | 31% | -13        | 15%                     | 31% | -16        |
| <i>Good</i>      | 7%       | 26% | -19        | 0        | 19% | -19        | 5%                      | 22% | -17        |
| <i>Medium</i>    | 2%       | 26% | -24        | 0        | 3%  | -3         | 1%                      | 13% | -12        |

Figure 2 and Figure 3 present comparative graphs for the academic success of boys and

girls, respectively, for sports players and non-sports players.

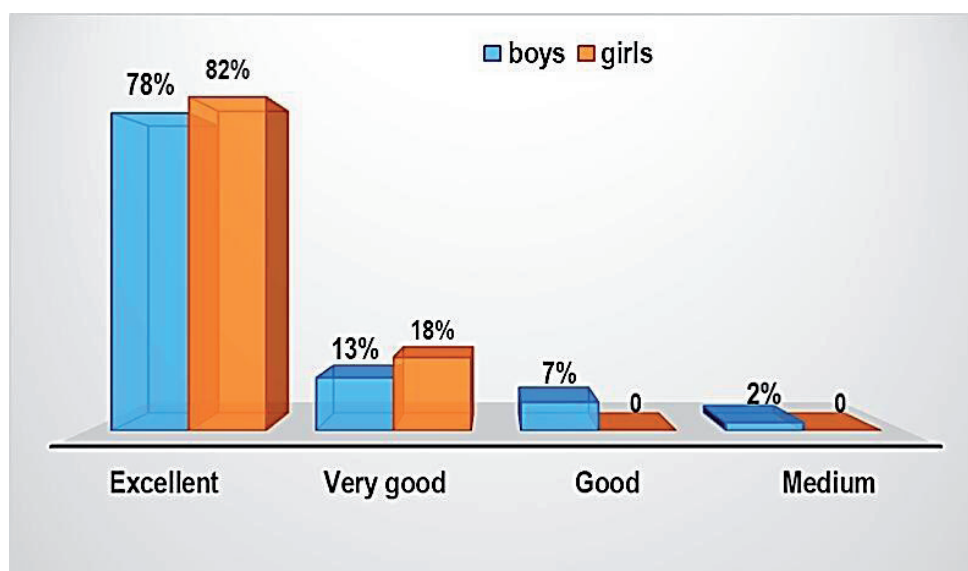


Figure 2. School success of athletes.

For example, nearly 80 % of judo students achieve excellent results (Fig. 2). This is most likely due to the fact that these children become

more disciplined, more organized, and more responsible. This can also be an important motive for parents to direct their children to this sport.

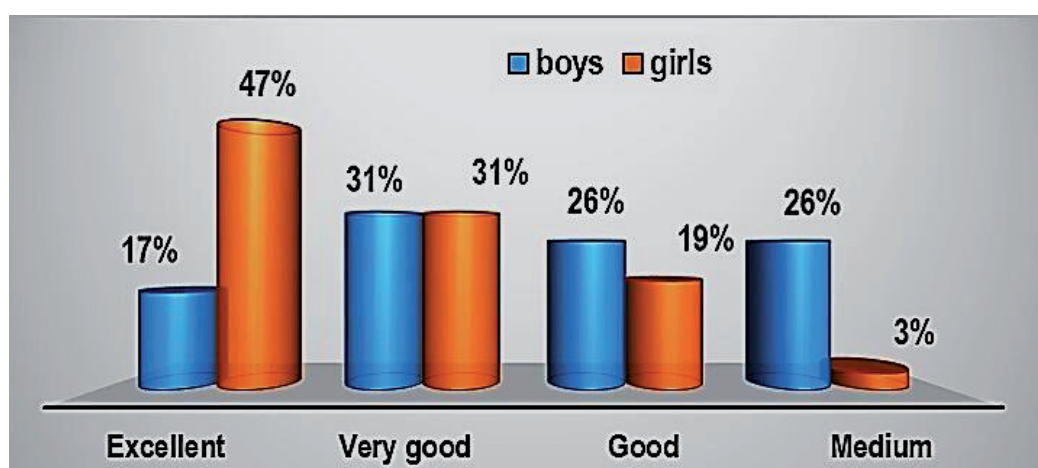


Figure.3 School success of those who do not play sports.

The significantly larger gender differences are striking for those who do not play sports. This applies to the highest level of excellent grades. In this sense, it can be argued that judo positively affects the structural distribution of boys.

## DISCUSSION

The results of the study highlight the importance of physical activity for students' academic performance. Children who participate in sports, especially those who practice judo, demonstrate exceptional achievements in

school, with nearly 80 % of them achieving excellent grades. This correlation between sports and education can be explained by a number of factors.

Sports encourage the development of discipline, responsibility, and organizational skills, which are key not only in the judo hall but also in the classroom. Participation in sports activities can improve students' concentration and focus, which in turn leads to better academic results. Judo as a sport offers exceptional opportunities for physical education and development of the child's body

and character. Judo training in most cases has a very big impact on positive changes in children, in their mastery of basic motor skills. But this mastery does not come suddenly and we must remember that children are not just 'adults in miniature'. For almost every skill, the developing child must go through a series of developmental stages.

## CONCLUSIONS

The physical capabilities of children of primary school age allow for the implementation of an optimally demanding motor regime, which has a beneficial positive impact on the individual organs and systems of the child's body.

Relatively small differences in the physical development of the body between girls and boys allow them to effectively and fully participate in similar physical activities. The analysis shows that the improvement of motor structures follows a certain stage, in which each phase is important for the progress of individuals. The age of 10 is considered the most favorable period for the development of

motor skills and they are able to perform more difficult coordination exercises. The ability to develop fine motor skills also increases.

Our research shows that the judo educational program has a strong positive effect on the behavior of children of primary school age and corresponds to the socially sought-after traits expected by families and teachers at school. To attract more children to judo halls, it is necessary to emphasize the positive aspects of practicing this sport and to ensure that this information reaches parents.

## \*NOTE:

Conflict of Interest: No conflict of interest was declared by the author and the institution.

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Declarations of informed consent have been signed regarding the publication of survey data.

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## Хармонично развитие на психически, физически и емоционален уелнес при ученици, практикуващи джудо

Николина Димитрова

Уелнес е преди всичко добро физическо и психическо здраве, добре известно е, че основите на психо физическите и интелектуалните способности се полагат в ранна детска възраст. Джудо спомага за цялостното личностно изграждане. Изследването има за цел да оцени въздействието от тренировките по джудо върху психо емоционално състояние и физическото развитие и дееспособност на деца от начална училищна възраст от 8 до 12 години. Системният подход предполага разработването и на адекватна тестова батерия за спортно-педагогическа оценка на двигателните и психо-физическите качества на индивида. Използваната на този етап тестова батерия се оказва успешна за нуждите на този пилотен експеримент тъй като беше предварително възприета от родители и учители, чиито контингент участваха в изследването. Резултатите показват значително по-големите различия между спортуващите и не спортуващите, не само във физическото им развитие, но прави впечатление коренно различната структура при формиране на интересите им. Джудо като спорт предлага изключителни възможности за творчество, както в областта на високото спортно майсторство, така и за физическото възпитание и развитие на детския организъм и характер. За привличане на повече деца в залите по джудо е необходимо да се акцентира на положителните аспекти от заниманията с този спорт и да се осигури възможността тази информация да достигне до родителите.

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