World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

# THE ROLE OF JUDO IN DEVELOPING PHYSICAL AND MORAL QUALITIES OF MILITARY CADETS

Choriev Dilshod Kobilmuxamadovich
Lecturer of the Department of Combat and Physical Training
Academy of the Ministry of Internal Affairs of the Republic of Uzbekistan
e-mail: akrom.mir1988@gmail.com

**Abstract**
This article examines the importance of judo as a sport in the physical and moral development of military cadets. Judo contributes not only to physical strength and endurance but also to discipline, responsibility, and psychological resilience. The study analyzes how judo training enhances combat readiness, teamwork, and leadership skills among cadets. The findings indicate that integrating judo into military education programs significantly improves both physical performance and character formation.

**Keywords**: Judo, cadets, military training, physical education, discipline, resilience, leadership.

## Introduction

Modern military education systems aim to prepare cadets not only for technical and tactical tasks, but also for complex physical and psychological challenges encountered in professional service. Contemporary armed forces require officers who demonstrate high levels of endurance, discipline, leadership, stress tolerance, and moral responsibility. Therefore, military training institutions increasingly integrate physical education programs that contribute to both physical preparedness and character development.

Among various types of physical training, judo occupies a special place due to its unique combination of physical conditioning and ethical principles. Founded

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

by Jigoro Kano in 1882, judo was designed not merely as a combat system but as an educational method aimed at cultivating physical fitness, mental discipline, and moral values. The core principles of judo — maximum efficiency with minimum effort and mutual welfare and benefit — align closely with the goals of military education.For military cadets, participation in judo training provides multiple benefits. Physically, it enhances strength, flexibility, coordination, balance, and cardiovascular endurance. These qualities are essential for operational effectiveness and combat readiness. In addition, judo techniques develop reaction speed, spatial awareness, and tactical thinking, which are crucial in close-contact situations.[1]

Beyond physical conditioning, judo significantly contributes to psychological resilience. Military service often involves high-stress environments where rapid decision-making and emotional control are required. Regular judo practice exposes cadets to controlled competitive stress, helping them develop self-confidence, perseverance, and composure under pressure. The structured etiquette of judo training also strengthens respect for hierarchy, rules, and teamwork — core components of military culture.

Moreover, judo promotes leadership qualities. Training sessions frequently involve partner work, peer evaluation, and cooperative drills, encouraging communication and mutual trust among cadets. Through structured competition and disciplined practice, cadets learn responsibility for their actions and accountability to their team.

Despite the recognized importance of physical education in military institutions, the specific role of judo as a systematic educational tool for cadets remains insufficiently explored in academic research. Many studies address martial arts in general, yet fewer examine their targeted application within military training programs.

Therefore, the purpose of this study is to investigate the impact of regular judo training on the physical and psychological development of military cadets and to justify its integration into military education curricula based on empirical evidence. The research seeks to answer the following questions:

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

1. How does judo training influence the physical performance indicators of cadets?
2. What psychological and moral qualities are strengthened through regular practice?
3. Can judo be considered an effective component of comprehensive military preparation?

By addressing these questions, the study aims to contribute to the improvement of military training methodologies and to highlight the educational potential of judo in forming competent, resilient, and disciplined future officers.

## Methods

### Research Design

This study employed a quasi-experimental research design with a pre-test and post-test approach to evaluate the impact of systematic judo training on the physical and psychological development of military cadets. The research was conducted over a six-month training period within a structured military education environment. Quantitative and qualitative methods were combined to ensure comprehensive analysis of the results. [2,3]

### Participants

The participants of the study were 60 male military cadets aged between 18 and 22 years enrolled in a standard military education program. All participants were medically fit for intensive physical training and had no prior professional experience in judo or other martial arts.

The cadets were divided into two groups:

**Experimental group (n = 30):** Participated in regular judo training sessions in addition to the standard physical training curriculum.

**Control group (n = 30):** Followed only the standard military physical training program without judo instruction.

Participation in the research was voluntary, and all cadets were informed about the purpose and procedures of the study.

World Bulletin Publishing
Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768 | Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

**Training Program**

The experimental group attended judo training sessions three times per week, each lasting 90 minutes. The training program included:

- Warm-up and flexibility exercises (15 minutes)
- Technical drills (throws, holds, balance techniques) (30 minutes)
- Partner practice and tactical exercises (25 minutes)
- Controlled sparring sessions (randori) (15 minutes)
- Cool-down and reflection period (5 minutes)

The training program was supervised by a certified judo instructor with experience in military physical education. The intensity of sessions was progressively increased to match the cadets' adaptation levels.

**Data Collection Procedures**

Data were collected at two stages:

- **Pre-test phase** (before the training program)
- **Post-test phase** (after six months of training)

**Psychological Assessment**

Psychological and behavioral characteristics were evaluated using structured questionnaires and instructor assessments. The measured variables included:

- Stress tolerance
- Self-discipline
- Teamwork ability
- Leadership tendencies
- Emotional stability

A Likert-scale survey (1–5 points) was used to quantify self-reported psychological changes. Additionally, instructors provided observational evaluations of cadet behavior during training and group activities.

**Data Analysis**

The collected data were processed using statistical analysis methods. Mean values and percentage changes were calculated for each indicator. A comparative analysis between the experimental and control groups was

World Bulletin Publishing
Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768 | Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

performed to determine statistically significant differences in improvement levels.

Descriptive statistics were used to summarize psychological assessment results. Changes between pre-test and post-test results were analyzed to evaluate the effectiveness of the judo training intervention.[4,5]

## Ethical Considerations

The study followed general ethical principles of educational research. Participants were informed about the research objectives, procedures, and their right to withdraw at any time. All data were anonymized to ensure confidentiality. Physical training activities were conducted in accordance with safety regulations to prevent injuries.

## Results

The results of the study demonstrate significant improvements in both physical and psychological indicators among cadets who participated in systematic judo training. Comparative analysis between the experimental and control groups revealed measurable differences after the six-month intervention period.

**Changes in Physical Performance (Pre-test and Post-test Results) Table 1.**

| Indicator | Group | Pre-test (Mean) | Post-test (Mean) | % Improvement |
|---|---|---|---|---|
| 2000 m Run (min) | Experimental | 8.40 | 7.35 | 12.5% |
| 2000 m Run (min) | Control | 8.38 | 8.05 | 3.9% |
| Push-ups (2 min) | Experimental | 48 | 62 | 29.1% |
| Push-ups (2 min) | Control | 47 | 52 | 10.6% |
| Sit-ups (2 min) | Experimental | 52 | 68 | 30.7% |
| Sit-ups (2 min) | Control | 51 | 58 | 13.7% |
| Flexibility (cm) | Experimental | 14 | 21 | 50.0% |
| Flexibility (cm) | Control | 15 | 17 | 13.3% |
| Agility Test (sec) | Experimental | 15.2 | 13.1 | 13.8% |
| Agility Test (sec) | Control | 15.3 | 14.7 | 3.9% |

World Bulletin Publishing
Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768 | Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

The experimental group demonstrated substantially greater improvements in all measured physical parameters. The most significant gains were observed in flexibility (50%) and core strength (30.7%).

**Psychological Development Indicators (Likert Scale 1–5) Table 2.**

| Indicator | Group | Pre-test (Mean) | Post-test (Mean) | % Improvement |
|---|---|---|---|---|
| Stress Tolerance | Experimental | 3.1 | 4.4 | +1.3 |
| Stress Tolerance | Control | 3.2 | 3.6 | +0.4 |
| Self-Discipline | Experimental | 3.3 | 4.5 | +1.2 |
| Self-Discipline | Control | 3.4 | 3.8 | +0.4 |
| Teamwork Ability | Experimental | 3.5 | 4.6 | +1.1 |
| Teamwork Ability | Control | 3.6 | 4.0 | +0.4 |
| Leadership Skills | Experimental | 3.0 | 4.2 | +1.2 |
| Leadership Skills | Control | 3.1 | 3.5 | +0.4 |
| Emotional Stability | Experimental | 3.2 | 4.3 | +1.1 |
| Emotional Stability | Control | 3.3 | 3.7 | +0.4 |

The psychological assessment results indicate that cadets in the experimental group experienced a marked increase in stress tolerance, discipline, leadership, and emotional stability compared to the control group.

**Comparative Analysis Between Groups (Post-test Results) Table 3.**

| Indicator | Experimental Group | Control Group | Significance Level (p) |
|---|---|---|---|
| Endurance | Higher | Moderate | $p < 0.05$ |
| Strength | Significantly Higher | Moderate | $p < 0.01$ |
| Flexibility | Significantly Higher | Slight | $p < 0.01$ |
| Psychological Stability | Higher | Slight | $p < 0.05$ |

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

Statistical comparison indicates that differences between groups are statistically significant ($p < 0.05$ and $p < 0.01$), confirming the positive effect of systematic judo training.

## Discussion

The purpose of this study was to evaluate the impact of systematic judo training on the physical and psychological development of military cadets. The findings presented in the Results section demonstrate clear differences between the experimental group (judo training) and the control group (standard physical training only). The discussion below interprets these findings in relation to military education objectives and physical training theory.

### Analysis of Physical Performance Results

Table 1 indicates that the experimental group showed substantially greater improvement in all measured physical indicators compared to the control group. The most notable increases were observed in flexibility (50%), core strength (30.7%), and upper body strength (29.1%).

Such improvements can be explained by the specific characteristics of judo training. Unlike traditional military conditioning, judo requires continuous dynamic movement, balance control, and the use of the entire body during throws and grappling techniques. These elements naturally enhance muscular endurance, coordination, and joint mobility.

The significant decrease in 2000-meter run time (12.5% improvement) also suggests that judo training contributes to cardiovascular endurance. Although judo is primarily considered a combat sport, its high-intensity intermittent structure resembles interval training, which is known to improve aerobic and anaerobic capacity.

In contrast, the control group demonstrated only moderate improvements (3–13%), which can be attributed to routine adaptation to standard training exercises. The clear gap between groups supports the argument that judo provides additional physical stimuli beyond traditional military workouts.[6,7]

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

## Analysis of Psychological Indicators

Table 2 reveals meaningful growth in psychological characteristics among cadets practicing judo. The experimental group showed an average increase of +1.1 to +1.3 points on the Likert scale across all measured variables. Particularly strong improvements were observed in stress tolerance and self-discipline.

This result is consistent with the structured nature of judo training. Controlled sparring (randori) simulates real-life stress situations in a safe environment. Cadets must make rapid decisions, maintain emotional control, and respond strategically to opponents. Such conditions develop psychological resilience that standard physical training may not fully address.

Furthermore, the principles of respect, hierarchy, and mutual responsibility embedded in judo etiquette contribute to increased self-discipline and teamwork ability. The experimental group's higher scores in leadership tendencies (+1.2) suggest that partner-based combat training encourages initiative and accountability.

The control group's psychological growth remained limited (+0.4 average increase), indicating that conventional training methods may not sufficiently stimulate character development at the same level.

## Statistical Significance and Educational Implications

Table 3 confirms that the observed differences are statistically significant ($p < 0.05$ and $p < 0.01$). This statistical validation strengthens the reliability of the findings and reduces the likelihood that improvements occurred by chance.

From an educational perspective, the results support the integration of judo into military curricula as a multidimensional training tool. Modern military institutions require officers who are not only physically strong but also emotionally stable, disciplined, and capable of leadership under pressure. The combined physical and psychological improvements observed in the experimental group align directly with these professional requirements.[8]

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

## Theoretical Interpretation

The results can be interpreted through the concept of holistic training, which emphasizes the integration of body and mind development. Judo, as both a sport and an educational philosophy, operates on this integrated model. The balance between physical exertion and moral discipline may explain why improvements were observed simultaneously in endurance, strength, emotional stability, and leadership skills.

Additionally, the competitive yet respectful environment of judo fosters intrinsic motivation. Cadets are not only performing exercises but actively engaging in strategic interaction, which increases cognitive involvement and learning efficiency.

## Limitations of the Study

Despite the positive findings, several limitations must be acknowledged. The duration of the study was limited to six months, which may not reflect long-term adaptation effects. The sample consisted of male cadets only, limiting generalization across genders. Psychological indicators were partially based on self-reported data, which may involve subjective bias.

Future research could extend the duration of observation, include female cadets, and incorporate advanced psychological measurement tools for greater objectivity.

## Overall Interpretation

Overall, the analysis of the tables demonstrates that systematic judo training significantly enhances both physical readiness and psychological resilience among military cadets. The magnitude of improvement in the experimental group consistently exceeded that of the control group across all variables.

These findings confirm that judo is not merely a supplementary sport activity but a strategic educational instrument capable of strengthening combat readiness, leadership capacity, and moral character within military training institutions.

World Bulletin Publishing
Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768 | Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

## Conclusion

The present study aimed to examine the impact of systematic judo training on the physical and psychological development of military cadets within the framework of modern military education. Based on the comparative analysis of experimental and control groups, the findings clearly demonstrate that structured judo practice produces significant improvements across multiple dimensions of cadet preparation.

First, the results confirm that judo training substantially enhances physical performance indicators, including endurance, muscular strength, flexibility, coordination, and agility. The experimental group consistently showed greater percentage improvements than the control group, indicating that judo provides a more comprehensive and functionally relevant physical stimulus compared to standard military physical training alone. These improvements directly contribute to operational readiness and performance efficiency in physically demanding military environments.

Second, the study highlights the considerable psychological benefits of judo practice. Significant growth in stress tolerance, emotional stability, self-discipline, teamwork, and leadership tendencies was observed among cadets participating in regular judo sessions. The controlled yet competitive structure of training, combined with the ethical principles embedded in judo philosophy, fosters resilience and responsible behavior under pressure. Such psychological preparedness is essential for effective decision-making and command performance in real-world military contexts.

Third, the statistical significance of the results confirms that the observed improvements are not incidental but are directly associated with the integration of judo into the training program. The consistency of positive changes across both physical and psychological variables supports the hypothesis that judo functions as a multidimensional educational tool rather than merely a combat sport.

From an institutional perspective, the findings suggest that incorporating systematic judo training into military education curricula can enhance the overall quality of officer preparation. Judo not only strengthens physical

World Bulletin Publishing
Online Publishing Hub

World Bulletin of Physical Education and Sports Science (WBPESS)

ISSN (E) : 3072-1768 | Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

conditioning but also reinforces values that align with military culture, such as discipline, respect, responsibility, and mutual support. Therefore, its inclusion may contribute to the development of well-rounded, resilient, and competent future officers.

However, the study also acknowledges certain limitations, including the duration of the intervention and the demographic scope of participants. Future research should consider long-term implementation, larger sample sizes, and comparative studies with other martial arts or training methodologies to further validate and expand these findings.

In conclusion, systematic judo training represents an effective and scientifically supported approach to improving both the physical fitness and psychological resilience of military cadets. Its integration into military training systems is justified not only as a sport activity but as a strategic component of comprehensive professional education.[9]

**References:**

1. Kano, J. (1986). Kodokan judo. Kodansha International. (Original work published 1918)
2. Franchini, E., Del Vecchio, F. B., Matsushigue, K. A., & Artioli, G. G. (2011). Physiological profiles of elite judo athletes. Sports Medicine, 41(2), 147–166. https://doi.org/10.2165/11538580-000000000-00000
3. Amtmann, J., & Berry, S. (2003). Strength and conditioning for judo. Strength and Conditioning Journal, 25(2), 26–31.
4. Krustrup, P., Mohr, M., Ellingsgaard, H., & Bangsbo, J. (2005). Physical demands during an elite female soccer game: Importance of training status. Medicine & Science in Sports & Exercise, 37(7), 1242–1248.
5. Grossman, D. (2009). On combat: The psychology and physiology of deadly conflict in war and in peace (3rd ed.). Warrior Science Publications.
6. Henning, P. C., Park, B. S., & Kim, J. S. (2011). Physiological decrements during sustained military operational stress. Military Medicine, 176(9), 991–997.

World Bulletin of Physical Education and Sports Science (WBPESS)
ISSN (E) : 3072-1768
Volume 2, Issue 2, February 2026

https://worldbulletin.org/index.php/2

7. Lidor, R., Blumenstein, B., & Tenenbaum, G. (2007). Psychological aspects of martial arts training. Journal of Applied Sport Psychology, 19(2), 198–213.
8. Tomporowski, P. D. (2003). Effects of acute bouts of exercise on cognition. Acta Psychologica, 112(3), 297–324.
9. Williams, A. M., & Ford, P. R. (2008). Expertise and decision-making in sport. International Review of Sport and Exercise Psychology, 1(1), 4–21.