# THE ROLE OF STUDENT SPORTS CLUBS AND LEAGUES IN YOUTH MASS SPORTS

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**Abstract.** This study examines the institutional role of student sports clubs and campus sports leagues in mitigating physical inactivity (hypodynamia) and promoting mass physical activity within higher education institutions. A six-month pedagogical experiment involving 120 undergraduate students demonstrated that systematic engagement in student sports clubs and intramural leagues significantly increased weekly physical activity to an average of 392.6 minutes and daily step counts to 10,800 steps, while reducing the prevalence of chronic fatigue symptoms from 58.3% to 18.3% ($p < 0.01$). Furthermore, the study substantiates key operational mechanisms, including tiered league division systems and digital performance tracking, as viable drivers for sustaining student engagement in mass sports.

**Keywords:** student sports club, sports leagues, mass physical activity, hypodynamia, gamification, academic-athletic motivation.

# РОЛЬ СТУДЕНЧЕСКИХ СПОРТИВНЫХ КЛУБОВ И ЛИГ В МАССОВОМ МОЛОДЕЖНОМ СПОРТЕ

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**Аннотация.** В данном исследовании рассматривается институциональная роль студенческих спортивных клубов и университетских спортивных лиг в снижении уровня физической пассивности (гиподинамии) и стимулировании массовой физической активности в высших учебных заведениях. Шестимесячный педагогический эксперимент с участием 120 студентов показал, что систематическое участие в студенческих спортивных клубах и внутриуниверситетских лигах значительно увеличило еженедельную физическую активность в среднем до 392,6 минут и ежедневное количество шагов до 10 800, одновременно снизив распространенность симптомов хронической усталости с 58,3% до 18,3% ($p < 0,01$). Кроме того, исследование подтверждает ключевые операционные механизмы, включая многоуровневые

системы разделения на лиги и цифровое отслеживание результатов, как эффективные факторы поддержания вовлеченности студентов в массовый спорт.

**Ключевые слова:** студенческий спортивный клуб, спортивные лиги, массовая физическая активность, гиподинамия, геймификация, академическо-спортивная мотивация.

## YOSHLAR OMMAVIY SPORTIDA TALABALAR SPORT KLUBLARI VA LIGALARINING ROLI

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**Abstrakt.** Ushbu tadqiqot talabalar sport klublari va kampus sport ligalarining oliy ta'lim muassasalarida jismoniy faollikning sustligini (gipodinamiya) kamaytirish va ommaviy jismoniy faollikni targ'ib qilishdagi institutsional rolini o'rganadi. 120 nafar bakalavr talabasi ishtirok etgan olti oylik pedagogik tajriba shuni ko'rsatdiki, talabalar sport klublari va o'quv yurtlari ichidagi ligalarda muntazam ravishda ishtirok etish haftalik jismoniy faollikni o'rtacha 392,6 daqiqagacha va kunlik qadamlar sonini 10 800 qadamgacha sezilarli darajada oshirdi, shu bilan birga surunkali charchoq alomatlarining tarqalishini 58,3% dan 18,3% gacha kamaytirdi ($p < 0,01$). Bundan tashqari, tadqiqot talabalarning ommaviy sportga jalb etilishini saqlab qolish uchun samarali omil sifatida bosqichma-bosqich liga bo'linish tizimlari va raqamli natijalarni kuzatish kabi asosiy operatsion mexanizmlarni asoslaydi.

**Kalit so'zlar:** talabalar sport klubi, sport ligalari, ommaviy jismoniy faollik, gipodinamiya, o'yinlashtirish, akademik-sport motivatsiyasi.

**Introduction.** Rapid technological advancement and the widespread digitalization of daily life and academic environments have introduced significant conveniences while concurrently precipitating serious socio-medical challenges. In particular, university students are increasingly exposed to intense intellectual demands, high volumes of digital information, and prolonged static sitting postures. Consequently, the risk of physical inactivity (hypodynamia) has escalated markedly, leading to functional decrements in the cardiovascular, respiratory, and musculoskeletal systems, as well as elevated rates of chronic fatigue and psycho-emotional stress.

According to World Health Organization (WHO) physical activity guidelines, maintaining physical well-being and optimal cognitive performance requires at least 150 to 300 minutes of moderate-to-vigorous aerobic physical activity per week. However, prevailing academic curricula in national higher education institutions typically limit compulsory physical education classes to 2 – 4 academic hours per week. While these mandatory sessions are essential for developing basic motor skills, they are quantitatively insufficient to fulfill the physiological movement needs of young adults.

In this context, there is a compelling need for engaging, autonomous, and systematically organized extracurricular physical activity formats. Establishing student sports clubs and enduring intramural sports leagues represents a strategic solution within contemporary higher education. In contrast to mandatory academic physical education programs driven by administrative requirements, student sports clubs function as voluntary, student-led institutions that foster healthy competition, peer engagement, and the intrinsic enjoyment of sports.

**Research Aim and Objectives.**

**Aim:** To evaluate the institutional mechanisms of establishing student sports clubs and inter-faculty sports leagues in higher education institutions, and to empirically validate their effectiveness in promoting mass physical activity among undergraduate students.

**Objectives:**

1. To assess the baseline prevalence of hypodynamia and the limitations of conventional physical education classes in meeting physiological movement needs;
2. To design an intramural sports framework based on tiered divisions (competitive vs. recreational) and digital activity-tracking tools;
3. To comparatively analyze students' motor activity metrics (daily step count, weekly active minutes) and motivational dynamics over a six-month pedagogical intervention;
4. To formulate evidence-based practical recommendations for integrating mass sports into university student lifestyles.

**Materials and Methods.** The empirical investigation was conducted during the 2025–2026 academic year at Kokand State University. The study cohort comprised n = 120 first – and second-year undergraduate students (mean age: 19.6 ± 1.1 years; 66 males, 54 females) enrolled in non-sport academic majors (History, Philology, Natural and Exact Sciences). All participants underwent pre-screening medical evaluations and were cleared as healthy (classified into the main medical category for physical exercise).

Participants were assigned into two parallel groups based on baseline equivalence:

- Control Group (CG, n = 60): Participated exclusively in standard curriculum-based physical education classes (2 academic hours per week), with extracurricular involvement limited to standard campus-wide events.
- Experimental Group (EG, n = 60): Attended standard curriculum classes while additionally being enrolled in the university student sports club and participating systematically in weekly inter-faculty sports leagues.

Assessment Tools and Procedures:

- Instrumental Activity Monitoring: Daily motor activity was continuously monitored using commercial smart bands/fitness trackers, recording daily step counts and heart rate dynamics.
- International Physical Activity Questionnaire: Administered to evaluate the volume and duration of moderate-to-vigorous physical activity (minutes/week) and daily sedentary behavior.
- Psychological & Motivational Survey: Standardized questionnaires assessed intrinsic motivation, interest in athletic competition, and hypodynamia-related fatigue symptoms.
- Statistical Analysis: Data were synthesized as Mean pm Standard Deviation (M ± SD) and relative frequencies (%). Inter-group differences were evaluated using Student's independent-samples t-test and Pearson's Chi-square ($\chi^2$) test. Statistical significance was set at $p < 0.05$.

**Results.** Following the six-month intervention, statistically significant differences emerged between the control and experimental groups across physical activity parameters and motivational indicators.

**Table 1.** Comparative analysis of physical activity and functional indicators between the Control and Experimental groups (post-intervention)

| **Assessment Parameter** | **Control Group (CG, n=60n = 60n=60)** | **Experimental Group (EG, n=60n = 60n=60)** | **Statistical Significance (ppp)** |
|---|---|---|---|
| Weekly physical activity volume (min) | 135.4 ± 18.2 | 392.6 ± 24.5 | p < 0.001 |
| Average daily step count | 5,400 ± 850 | 10,800 ± 1,200 | p < 0.01 |
| High academic-athletic motivation (%) | 23.3% (n = 14) | 68.3% (n = 41) | p < 0.01 |
| Hypodynamia and chronic fatigue symptoms (%) | 58.3% (n = 35) | 18.3% (n = 11) | p < 0.01 |

| | | | |
|---|---|---|---|
| Commitment to independent exercise (%) | 16.7% (n = 10) | 61.7% (n = 37) | $p < 0.001$ |
| Perceived motor self-efficacy & confidence (%) | 31.6% (n = 19) | 75.0% (n = 45) | $p < 0.01$ |

As indicated in Table 1, students in the control group relying solely on compulsory classes averaged only 135.4 minutes of weekly physical activity – falling below WHO recommendations. Consequently, 58.3% of control participants continued to report chronic physical fatigue, reduced cognitive attention during lectures, and lethargy.

In contrast, participants in the experimental group exhibited nearly a threefold increase in weekly physical activity (392.6 minutes) and doubled their daily step count (10,800 steps), effectively overcoming sedentary risk thresholds. Concurrently, self-reported chronic fatigue declined sharply to 18.3%, while high athletic motivation rose to 68.3% ($p < 0.01$).

**Discussion.** The empirical findings suggest that the conventional pedagogical approach centered on mandatory attendance and standardized fitness testing provides insufficient motivation for university students. Developing lasting motor habits requires activities that are voluntary, engaging, and socially collaborative. Student sports clubs and intramural leagues establish precisely this type of institutional ecosystem.

The observed positive dynamics were facilitated by four key operational mechanisms:

1. Gamification and Structured Competition: Multi-stage inter-faculty leagues (futsal, volleyball, basketball, chess, table tennis, national games) fostered anticipation for weekly tournament fixtures. Students attended training sessions not out of academic obligation, but to represent their peers and experience team camaraderie.

2. Tiered Division Framework (Divisions “A” and “B”): A major psychological barrier in recreational sport is the intimidation experienced by novices when competing against trained athletes. Segmenting the league into a *Competitive Division* (for experienced/classified athletes) and a *Recreational Division* (for health-oriented beginners) ensured an equitable, psychologically safe environment for all skill levels.

3. Student Self-Governance and Leadership: Involving students directly in league governance – such as match officiating, schedule management, team leadership, and sports media volunteerism – transformed athletic activities into a core component of campus culture and peer engagement.

4. Digital Platform Integration: Disseminating real-time match results, standings, and individual statistics via university sports channels and social platforms boosted public visibility and personal accountability.

**Conclusion and Practical Recommendations.** Mandatory physical education classes (2 – 4 hours per week) alone cannot remediate hypodynamia in higher education settings. Independent student sports clubs and multi-tier sports leagues serve as effective institutional vehicles for sustaining weekly physical activity.

The six-month pedagogical intervention demonstrated that structured engagement in student clubs and leagues tripled weekly activity duration, doubled daily step counts, and reduced chronic fatigue from 58.3% to 18.3% ($p < 0.01$).

**Recommendations for Higher Education Institutions:**

1. Establish autonomous, student-led Student Sports Clubs supported by dedicated campus facilities and administrative backing.
2. Shift from one-off recreational tournaments to round-robin, multi-week Intramural Sports Leagues spanning the academic year.
3. Implement Tiered Divisions (competitive vs. recreational) to maintain broad, inclusive participation across diverse fitness levels.
4. Integrate Digital Tools & Gamification (mobile tracking, online leaderboards, and interactive rankings) to reinforce engagement and recognition.

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