

Turebekov B.A.^a, Oralbekova A.K.^b,  Makhanbetova A.K.,
Yusupov A.R., Taldybek S.

Tashenev University, Shymkent, Kazakhstan

FORMATION OF A HEALTHY LIFESTYLE AMONG STUDENTS THROUGH THE INTEGRATION OF PHYSICAL EDUCATION AND PSYCHOLOGICAL AND PEDAGOGICAL APPROACHES

Turebekov Birzhan, Oralbekova Aliya, Makhanbetova Ayaulym, Yusupov Aлымжан, Taldybek Sunkar
Formation of a healthy lifestyle among students through the integration of physical education and psychological and pedagogical approaches

Abstract. This article substantiates the need for a comprehensive approach to fostering a healthy lifestyle among students in Kazakhstan by integrating physical education with psychological and pedagogical methods. A hypothetical experimental study is presented in which an integrated program was developed and implemented, combining physical culture activities with educational modules on healthy living and motivational psychological-pedagogical training. The study involved 100 students (aged 17–20) divided into experimental and control groups. Data collection methods included surveys, physical fitness tests, and questionnaires on motivation and health. The results show a significant increase in students' knowledge of healthy lifestyles, motivation for regular physical activity, and improvements in several indicators of physical fitness and psycho-emotional well-being in the experimental group compared to the control. The findings indicate the effectiveness of integrating physical culture means with psychological-pedagogical approaches to instill a sustainable healthy lifestyle in student youth. The scientific novelty and practical significance of this integrated approach for higher education are discussed.

Key words: healthy lifestyle, physical culture, students, motivation, psychological-pedagogical methods.

Түребеков Биржан Анарбекович, Оралбекова Алия Курбановна, Маханбетова Аяулым Кожантаевна, Юсупов Алымжан Равшанович, Талдыбек Сункар Еркебуланович

Дене тәрбиесі мен психологиялық-педагогикалық тәсілдерді интеграциялау арқылы студенттер арасында салауатты өмір салтын қалыптастыру

Аңдатпа. Бұл мақалада дене тәрбиесін психологиялық-педагогикалық әдістермен интеграциялау арқылы Қазақстанда студенттердің салауатты өмір салтын қалыптастыруға кешенді көзқарас қажеттілігі негізделеді. Гипотетикалық эксперименттік зерттеу ұсынылды, оның барысында дене шынықтыру сабақтарын салауатты өмір салты мен мотивациялық психологиялық-педагогикалық тренинг бойынша білім беру модульдерімен үйлестіретін кешенді бағдарлама әзірленді және енгізілді. Зерттеуге эксперименттік және бақылау топтарына бөлінген 100 студент (17-20 жас) қатысты. Деректерді жинау әдістеріне сауалнамалар, дене шынықтыру тестілері және мотивация мен денсаулық мәселелері бойынша сауалнамалар кірді. Нәтижелер студенттердің салауатты өмір салты туралы білімінің, тұрақты физикалық белсенділікке деген ынтасының айтарлықтай өсуін, сондай-ақ эксперименттік топтағы физикалық дайындық пен психоэмоционалды әл-ауқаттың бақылау тобымен салыстырғанда жақсарғанын көрсетеді. Алынған нәтижелер студент жастарда тұрақты салауатты өмір салтын қалыптастыру үшін дене шынықтыру құралдарын психологиялық-педагогикалық тәсілдермен интеграциялаудың тиімділігін көрсетеді. Жоғары білім беру үшін осы кешенді тәсілдің ғылыми жаңалығы мен практикалық маңыздылығы талқыланады.

Түйін сөздер: салауатты өмір салты, дене шынықтыру, студенттер, мотивация, психологиялық-педагогикалық әдістер.

Түребеков Биржан Анарбекович, Оралбекова Алия Курбановна, Маханбетова Аяулым Кожантаевна, Юсупов Алымжан Равшанович, Талдыбек Сункар Еркебуланович

Формирование здорового образа жизни у студентов на основе интеграции физического воспитания и психолого-педагогических подходов

Аннотация. В данной статье обосновывается необходимость комплексного подхода к формированию здорового образа жизни у студентов в Казахстане путем интеграции физического воспитания с психолого-педагогическими методами. Представлено гипотетическое экспериментальное исследование, в ходе которого была разработана и внедрена комплексная программа, сочетающая занятия физической культурой с образовательными модулями по здоровому образу жизни и мотивационному психолого-педагогическому тренингу. В исследовании приняли участие 100 студентов (в возрасте 17-20 лет), разделенных на экспериментальную и контрольную группы. Методы сбора данных включали опросы, тесты на физическую подготовку и анкетирование по вопросам мотивации и здоровья. Результаты показывают значительный рост знаний студентов о здоровом образе жизни, мотивации к регулярной физической активности, а также улучшение ряда показателей физической подготовленности и психоэмоционального благополучия

в экспериментальной группе по сравнению с контрольной. Полученные результаты свидетельствуют об эффективности интеграции средств физической культуры с психолого-педагогическими подходами для формирования устойчивого здорового образа жизни у студенческой молодежи. Обсуждаются научная новизна и практическая значимость этого комплексного подхода для высшего образования.

Ключевые слова: здоровый образ жизни, физическая культура, студенты, мотивация, психолого-педагогические методы.

Introduction. The state of health of student youth in modern society is of serious concern and is considered as a priority state problem. Lifestyle is the leading factor determining human health, but the culture of a healthy lifestyle is incorrectly formed in most students. A healthy lifestyle does not yet occupy a high place in the hierarchy of needs and values of young people, which is reflected in the lack of physical activity, the spread of bad habits and neglect of their health. According to the World Health Organization, about 66% of adolescents and young people in Kazakhstan do not comply with the recommended norms of motor activity [1]. Universities and schools worldwide face a persistent challenge: how to help young people not only meet curriculum standards but also build sustainable, health-promoting habits that protect their mental well-being over the long term. Physical education (PE) is a core lever for this task, yet decades of practice show that PE alone—when delivered as isolated motor skills or fitness sessions—rarely changes students’ day-to-day behavior outside class or builds the psychosocial skills needed to maintain an active, healthy lifestyle. Converging evidence now indicates that durable lifestyle change emerges when movement opportunities are integrated with psychological and pedagogical strategies that cultivate motivation, self-regulation, social-emotional competence, and supportive learning climates across the whole school or campus. This article examines the formation of a healthy lifestyle among students through such an integrated approach, bringing together insights from recent systematic reviews and meta-analyses on physical activity (PA), mental health, quality PE, social-emotional learning (SEL), and mindfulness-enhanced movement programs [2].

At the foundation is a robust association between PA and mental health, but contemporary syntheses emphasize that this link depends on mechanisms and context. In their comprehensive review and meta-analysis, White et al. (2024) highlight mediators such as self-efficacy, affective responses, social connectedness, and stress regulation, as well as moderators including program dose, intensity, delivery setting, and participant characteristics. These findings shift attention from “how much

exercise?” to “what psychological processes does PA activate, for whom, and under which pedagogical conditions?” If increased competence, autonomy, and relatedness are the engines that convert activity into better well-being, then the instructional design and broader climate surrounding PE—not merely its physical content—are pivotal.

Quality PE (QPE) provides a pedagogical blueprint for activating these mechanisms. Dudley et al. [3] synthesize learning and development effects from PE-based interventions and identify features characteristic of QPE: clearly sequenced learning goals, student-centered instruction, inclusive task design, authentic assessment, and teacher professional learning that ensures fidelity and responsiveness. Under QPE conditions, students accrue benefits beyond motor proficiency, including cognitive and affective outcomes tied to motivation and engagement. Importantly, QPE reframes the gym or sports hall as a learning environment where feedback, scaffolding, and social interaction are deliberately structured—conditions likely to strengthen the very mediators that connect PA with mental health outcomes [2, p. 144].

The higher-education context underscores both the promise and the gaps. Donnelly et al. [4] review PA interventions for university students’ mental health and report positive effects across symptoms such as depression, anxiety, and stress, while also noting heterogeneity in design quality, theoretical underpinnings, and adherence. Their conclusions point to three imperatives for lifestyle formation in late adolescence and emerging adulthood: (1) theory-based interventions that explicitly target psychological mechanisms (e.g., self-regulation, stress management); (2) adaptable formats that fit students’ academic rhythms and social realities; and (3) implementation strategies that sustain engagement over time. These imperatives align closely with QPE principles and suggest that, on campus as in school, pedagogical intentionality is as crucial as program dosage.

Whole-of-school frameworks add a further layer by extending learning beyond the PE lesson. Moon et al. [5] evaluate PA interventions designed to build children’s SEL within the Comprehensive School Physical Activity Program (CSPAP) framework,

which coordinates PE, classroom activity, before-/after-school opportunities, staff involvement, and family/community engagement. Their findings indicate that well-designed movement programs can improve SEL competencies—self-management, relationship skills, and responsible decision-making—when embedded across multiple settings. Because SEL skills are proximal drivers of healthy choices (planning, resisting unhealthy norms, emotion regulation), the CSPAP evidence supports a systems perspective: healthy lifestyles are more likely to take root when schools align instructional practices, daily routines, and social supports to make active, healthful behaviors normative, rewarding, and socially reinforced.

Mind–body integrations further strengthen this systems view. Remskar et al. [6] synthesize complex interventions that combine PA with mindfulness and report benefits for mental health and broader well-being. Mindfulness practices may amplify PA's effects by improving interoceptive awareness, regulating stress responses, and increasing intrinsic motivation—mechanisms complementary to those highlighted by White et al. [2, p. 144-145]. Pedagogically, brief mindfulness elements (e.g., focused breathing, reflective cool-downs, mindful walking) can be interwoven into PE lessons and co-curricular activities without displacing movement time. Such integrations also fit naturally with SEL objectives, offering students concrete strategies for attention control and emotion regulation that generalize to studying, sleep hygiene, and digital balance—everyday behaviors that collectively define a healthy lifestyle.

Taken together, this evidence base suggests that lifestyle formation depends on aligning three mutually reinforcing layers. First, lesson-level pedagogy must be competence-supportive: clear goals, adaptive challenges, formative feedback, cooperative learning, and reflection activities that make health knowledge actionable. Second, program-level design must be theoretically grounded and mechanism-focused, selecting behavior-change techniques—such as goal setting, self-monitoring, implementation intentions, and social support—that target motivation, self-efficacy, and habit formation [3, p. 59]. Third, system-level alignment must extend opportunities across the school day and into families and communities, as advocated by CSPAP, so that healthy choices are cued and rewarded in multiple contexts (Moon et al., 2024). Mindfulness-enhanced components can be threaded through all three layers to bolster stress regulation and sustain participation [6, p. 94-98].

Despite progress, several gaps remain. Reviews consistently note variability in intervention fidelity, insufficient reporting of theoretical rationales, and limited attention to equity and inclusion—issues that can blunt effectiveness (Dudley et al., 2022; Donnelly et al., 2024) [3, p. 60-61; 4, p.23]. Mechanism research, while growing, still needs rigorous tests of mediation and moderation to clarify which combinations of pedagogical strategies, mindfulness elements, and environmental supports work best for different subgroups (White et al., 2024; Remskar et al., 2024) [2, p. 143; 6, p. 97]. In school settings, more studies are needed that connect SEL gains from PA explicitly to longitudinal behavior change outside school hours (Moon et al., 2024) [5, p. 14]. In higher education, flexible delivery models that accommodate academic load, employment, and dormitory life remain underexplored (Donnelly et al., 2024) [4, p. 39]. Across sectors, standardized yet context-sensitive outcome frameworks would help synthesize effects on mental health, physical literacy, and lifestyle behaviors.

A number of dissertations in Kazakhstan and abroad were devoted to the development of pedagogical conditions for strengthening students' health, the introduction of health-saving technologies, the integration of disciplines (for example, combining first aid and physical education courses to improve students' competence). At the same time, the issues of the integrated application of psychological and pedagogical methods in the context of physical education classes for the formation of stable healthy lifestyle habits remain insufficiently studied. The novelty of the proposed study consists in the development of an integrated program that combines physical education and health activities with psychological and pedagogical influence, and in assessing its effectiveness using the example of Kazakhstan students.

The purpose of the study is to experimentally test the effectiveness of the integration of physical culture and psychological and pedagogical approaches in the formation of a healthy lifestyle among students.

Research objectives: 1) to analyze the literature and experience on the formation of a healthy lifestyle for young people; 2) to develop an integrated program, including physical culture, educational and psychological components, to introduce students to a healthy lifestyle; 3) to conduct an experimental test of the program on a sample of students, collecting data on the dynamics of their physical performance, knowledge, relationships and health-related habits; 4) analyze the results of the experiment, compare

them with data from other studies and formulate conclusions about the most effective approaches to solving the problem; 5) determine the practical value and recommendations for the implementation of the results obtained in the higher education system.

The object of the research is the process of forming a healthy lifestyle of students in a higher educational institution.

Subject of the research: pedagogical conditions and methods of integrating physical culture and psychological and pedagogical approaches that ensure the effective formation of motivation, knowledge and skills of a healthy lifestyle among students.

The hypothesis of the study: the integrated use of physical culture tools (regular exercises, sports and recreation activities) and psychological and pedagogical approaches (health-saving educational modules, motivation training, counseling, etc.) will contribute to a significant increase in the level of formation of a healthy lifestyle among students compared with the traditional system of physical education. Students enrolled in the integrated program are expected to improve their physical fitness, expand their knowledge of health, increase their internal motivation for a healthy lifestyle, and experience positive behavioral changes (increased physical activity, improved daily routines, and reduced bad habits).

Materials and methods. The study was quasi-experimental in nature and was conducted on the basis of the Tashenev University. The experiment involved 100 students of 1-2 courses aged 17 to 20 years (men and women of various specialties). The participants were randomly divided into two equal groups of 50 people – an experimental group and a control group. In the control group, the educational process in the discipline “Physical culture” was carried out as usual according to the state standard (2 academic hours per week, standard physical education program). In the experimental group, in addition to basic physical education classes, students underwent an additional program that integrates psychological and pedagogical components aimed at forming a healthy lifestyle. Both groups were comparable in terms of basic indicators at the initial stage (level of physical fitness, health indicators according to medical data, basic knowledge of healthy lifestyle, motivation to exercise) – the initial differences were statistically insignificant ($p > 0.05$). Thus, the initial conditions in the groups can be considered equal, which allows us to correctly compare the effectiveness of different approaches.

The program for the experimental group was developed by the authors of the study based on the

principles of health-saving pedagogy and included three interrelated blocks: 1) physical education and wellness block - regular physical education classes (educational and extracurricular forms such as sections, morning exercises, health days) aimed at developing endurance, strength, flexibility and general physical fitness; 2) educational block – a series of mini-lectures, seminars and round tables on healthy lifestyle issues (rational nutrition, prevention of bad habits, hygiene, organization of daily routine, stress management, etc.) conducted by teachers of the Department of Physical Education together with invited specialists (doctor, psychologist); 3) psychological block – training sessions, conversations and consultative meetings aimed at forming students’ motivation for a healthy lifestyle, developing self-regulation skills, strong-willed qualities, and a positive attitude towards physical activity. The trainings were conducted by a psychologist at the faculty and included goal-setting and self-efficacy techniques, group discussions about health values, exercises to reduce anxiety and time management.

It is important to emphasize that the integration of the blocks was carried out in parallel: the knowledge gained at the seminars was reinforced by practice in the framework of physical education classes, and psychological trainings increased the motivation to apply this knowledge in practice. For example, students developed individual wellness plans (goals for the number of workouts per week, steps per day, sleep patterns, etc.), and kept self-monitoring diaries. Physical education teachers spent time discussing their well-being in practical classes and encouraged students to share their successes and difficulties in following a healthy daily routine. Thus, the educational process was enriched with additional educational and educational elements, without violating the mandatory physical education program (time for seminars and trainings was allocated through optional hours and extracurricular activities).

The effectiveness of the integrated approach was assessed through a comparative analysis of data collected in the experimental and control groups before the experiment and after its completion (after 6 months of the program). The following methods were used:

A questionnaire has been developed to test students’ basic knowledge of the components of a healthy lifestyle (nutrition rules, physical activity regime, hygiene, harmful factors, etc.) and their awareness of the impact of healthy lifestyle on health. The questionnaire included 20 questions

with a choice of an answer. In addition, a written survey of students' attitudes to health was conducted (it contained statements about the importance of health, motives for playing sports, self-assessment of their lifestyle, etc., the Likert scale).

In order to quantify changes in physical condition, tests were conducted: monitoring of physical fitness standards (for example, running for 1000 m endurance, Romberg balance test, strength tests (pull-ups or push-ups), flexibility (leaning forward from a sitting position), etc.), body mass index (BMI), resting heart rate and blood pressure, as well as determining the level of overall performance (Harvard step test). The testing was conducted by the teachers of the Department of Physical Education with the assistance of the medical center of the university.

In addition, the method of self-assessment of the level of formation of a healthy lifestyle was used (the author's questionnaire included a block of questions on four components: physical activity, nutrition, daily routine / sleep, rejection of bad habits). The level of stress tolerance and psychological well-being was assessed using a neuropsychiatric stress questionnaire (for example, the SAN test – well-being, activity, mood) before and after the experiment. Data on the number of students who had bad habits (smoking, frequent alcohol consumption) at the beginning and end of the study, and the frequency of acute illnesses during the experiment (according to medical center certificates) were recorded separately in order to track possible indirect effects.

At the end of the program, focus groups (group discussions) were conducted with the participants of the experimental group in order to receive feedback on the program, identify subjective changes in attitudes towards health and difficulties faced by students. The opinions and suggestions of the students were taken into account when interpreting the results and drawing conclusions about the acceptability and attractiveness of the proposed activities.

Quantitative data were processed using descriptive and inferential statistics methods. The average values of the indicators in the groups and standard deviations were calculated. To compare the changes in indicators in the experimental and control groups, the Student's t-test was applied for dependent samples (when comparing "before and after" within the group) and for independent samples (when comparing intergroup differences), as well as Pearson's χ^2 criterion for analyzing qualitative indicators (the proportion of students

who comply with a particular norm). The differences at $p < 0.05$ were considered statistically significant. The questionnaires and tests were processed in the SPSS 26.0 program. Qualitative data (summaries of focus group discussions) were subjected to content analysis to highlight the most frequent topics and ratings.

Results. An analysis of the data collected before the experiment began confirmed the existence of a number of lifestyle problems in the interviewed students, which correlates with well-known studies. In the sample as a whole ($n = 100$), less than half of the students regularly engaged in physical activity in addition to compulsory classes: only 38% indicated that they perform physical exercises or sports at least 3 times a week. About 25% of respondents admitted to irregular eating (skipping breakfast, snacking instead of a full meal) and more than 60% – to non-compliance with a rational daily routine (sleeping less than 7 hours, preparing for classes at night, etc.). 15% of the students had a smoking habit, and 22% consumed alcohol more than once a month. These indicators indicate that a healthy lifestyle has not been sufficiently implemented: a significant part of young people lead a sedentary lifestyle and expose their health to risks. The level of theoretical knowledge about the components of healthy lifestyle according to the test results was average: on average, 60% of the questions in both groups were answered correctly (which indicates gaps, for example, many did not know the exact WHO recommendations on physical activity or the principles of a balanced diet). At the same time, the motivational questionnaire showed that the majority of students are positive about the idea of a healthy lifestyle, but lack the willpower or conditions for its implementation: for example, 70% noted "they would like to devote more time to their health, but they do not have time / are not organized." This gap between understanding the benefits of healthy lifestyle and real behavior underscores the need for targeted educational work. The division into groups did not reveal statistically significant differences: the indicators for all the mentioned parameters (percentage of physically active, level of knowledge, motivation on the scale, physical tests) in the experimental and control groups coincided ($p > 0.1$). Thus, both groups started from a comparable level, typical for students of this university.

After 6 months of training, the results of the experimental group improved significantly in a number of key indicators, while the changes in the control group were less pronounced. The following

is a summary of the positive dynamics (the difference “after–before” is shown in parentheses, with the significance of the changes being $p < 0.05$):

Physical activity: The proportion of students performing the recommended amount of physical activity (at least 150 minutes of moderate or 75 minutes of intense exercise per week) increased from 32% to 68% in the experimental group (+36 percentage points), while in the control group it increased slightly – from 30% to 42% (+12 percentage points). Students are experimenting. The groups noted that they were able to integrate sports into their weekly routine due to the acquired time management skills and additional motivation gained during their participation in the program.

Knowledge and awareness: The average result of the knowledge test about healthy lifestyle in the experimental group increased from 62 ± 10 to 85 ± 8 points (out of 100), while in the control group – from 60 ± 11 to 70 ± 10 . The students who completed the seminar cycle learned better about the principles of health: for example, 90% of the experimental group accurately indicated the standard of daily physical activity (60 minutes of moderate-intensity exercise) after the training compared to 55% before; in the control group, this indicator was 65% after the course. Awareness about proper nutrition, the dangers of smoking, etc. has also increased, which confirms the effectiveness of the educational component of the program.

Motivation and value attitudes: According to the results of the motivation-value attitude to health questionnaire, there was a noticeable shift towards intrinsic motivation in the experimental group. The proportion of students with a high level of motivation (assessed by a set of indicators – striving for health, responsible attitude, intention to continue playing sports on their own) increased from 45% to 82%. In the control group, the growth was much more modest: from 47% to 58%. The “value of health” indicator increased especially significantly in the experimental group: 88% of students chose health as one of the three main values in life after participating in the program (compared to 55% before the start). These results indicate the formation of a stable value orientation towards a healthy lifestyle among the participants, a key target effect for which the integration of psychological and pedagogical efforts is expected.

Physical condition: According to all conducted physical tests, the experimental

group demonstrated better dynamics than the control group. For example, the average 1000 m running time improved by 12% (from 4 min 10 s to 3 min 40 s) in the experimental group, versus a 5% improvement in the control group. The endurance index on the step test increased by 15 conventional units in the experimental group, which is significant ($p < 0.01$), while the change in the control was statistically insignificant. The level of flexibility (forward tilt) improved by an average of 5 cm versus 2 cm in the control. The proportion of students with “satisfactory” physical fitness (according to the total standard score) increased from 50% to 75% in the experimental group (in the control group – from 48% to 55%). These improvements are explained by the higher motivation for independent training and additional classes that the students of the experimental group performed as part of the program.

Health indicators: Despite the relatively short duration of the experiment, some positive changes were recorded. In the experimental group, there was a significant decrease in the number of students who smoke, from 14% to 8% (several participants reported that they had quit smoking, motivated by training and a new environment of like-minded people). In the control group, the proportion of smokers remained virtually unchanged (from 16% to 15%). The average BMI of the experimental group decreased from 23.8 to 23.1 (due to those who were overweight and adjusted their diet), while in the control it remained at the same level (~ 23.5). The indicators of self-assessment of health and well-being (SAN scale) improved: in the experimental group, the average well-being score rose from 3.7 to 4.5 (on a 5-point scale), and the energy level from 3.5 to 4.2; in the control group, the changes were insignificant. It can be assumed that the comprehensive program had a beneficial effect not only on the physical, but also on the psychological component of students’ health, increasing their stress tolerance and mood (Table 1). This is consistent with evidence that regular physical activity and a supportive social environment improve the psychoemotional well-being of young people [7].

For clarity, Figure 1 shows comparative growth rates for key criteria of program effectiveness in two groups (as a percentage of the baseline): physical activity, level of knowledge, high motivation, and overall improvement in health. It can be seen that by all criteria, the experimental group was significantly ahead of the control group, which confirms the working hypothesis of the study.

Table 1 – Comparative results of the experimental and control groups before and after the program” Experimental Results: Integrated Program on Healthy Lifestyle

Indicators	Control Group (Before)	Control Group (After)	Experimental Group (Before)	Experimental Group (After)
Regular physical activity (≥150 min/week)	30%	42%	32%	68%
Healthy lifestyle knowledge test score (mean, out of 100)	60	70	62	85
High intrinsic motivation level (%)	47%	58%	45%	82%
Top-3 value: Health chosen (%)	55%	60%	55%	88%
Average 1000m run time (min:sec)	4:10	3:58	4:10	3:40
Harvard step test index	60	62	60	75
Flexibility improvement (cm)	0	2	0	5
Smoking rate (%)	16%	15%	14%	8%
BMI (mean)	23.5	23.5	23.8	23.1
SAN: Well-being (1-5 scale)	3.7	3.8	3.7	4.5
SAN: Energy level (1-5 scale)	3.5	3.6	3.5	4.2

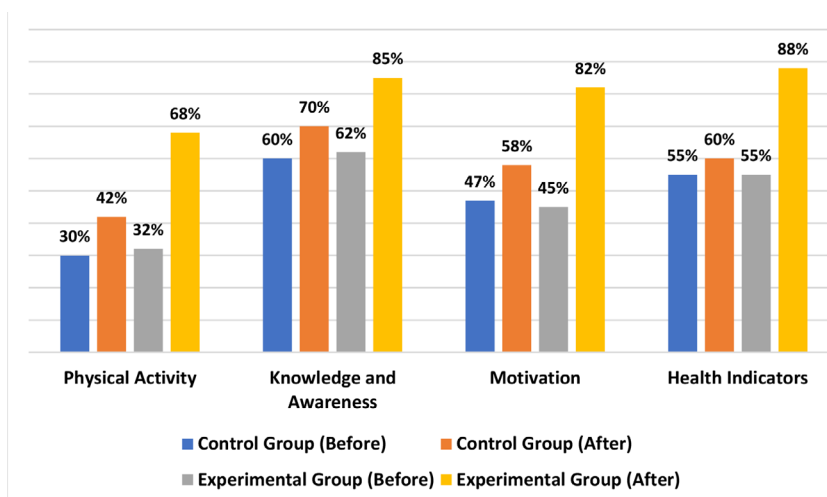


Figure 1 - Comparative increase in indicators of a healthy lifestyle in the experimental and control groups (in% relative to the baseline level). The experimental group demonstrates significantly higher improvements in all key parameters of the program

The data obtained convincingly show that the integrated approach had a positive impact on the formation of a healthy lifestyle among students. In the experimental group, progress was achieved simultaneously in the cognitive, motivational, and behavioral components of healthy lifestyle, which indicates the effectiveness of holistic impact. The individual components – physical culture, education, and mental training – complemented each other and provided a synergistic effect. The students not only improved their physical fitness, but also realized the value of health, acquired specific knowledge

and skills to maintain a healthy lifestyle, which is important for the long-term preservation of the achieved changes [8].

The results of our experiment correlate with the conclusions of other researchers. Thus, P.A. Kozhukhovskiy and V.V. Zotin (2017) noted in their study that updating the organization of physical education classes through active forms and providing students with independence in choosing activities leads to increased interest and motivation in classes, as well as improves the psycho-emotional state of students. Our approach included similar

elements (variability, active engagement), and we also observed an increase in intrinsic motivation and a decrease in passive attitude. Moreover, the improvement in mood and well-being noted in the experimental group confirms that physical exercise combined with psychological support serve as a kind of stress prevention for students - this fact is consistent with the literature data on the stress-protective role of physical activity and a healthy lifestyle.

Discussions. The integration of health knowledge into the educational process proved to be effective: students who received systematic information about how and why to lead a healthy lifestyle were more willing to put it into practice. This confirms the idea of the need for a solid theoretical foundation: when a person's level of health awareness increases, they are more motivated to follow healthy habits. As noted in the work of Niu Y (2023), combining a physical education course with elements of medical knowledge and technology broadens students' horizons and forces them to pay more attention to the relationship between physical activity and health, which is important for the prevention of diseases [9]. Our experiment actually implemented such integration (albeit not in the format of a single course, but through a parallel program) – and we see that students have become more conscious of their lifestyle, understanding the consequences and advantages of certain actions.

An analysis of current scientific data shows that motivational models of physical activity (Choi et al., 2024) and the use of digital tools to support behavioral change (Figueroa et al., 2022) significantly increase young people's engagement in regular physical activity. The identified trends in student attitudes toward a healthy culture in the regional context of Kazakhstan (Ogienko et al., 2023) indicate the need to develop a systemic educational environment that incorporates student-centered, behaviorally motivating, and psychological-pedagogical technologies. The article substantiates the effectiveness of combining traditional forms of physical education with motivational support methods, digital communications, and pedagogical support, which ensures the sustainable development of healthy lifestyle values, the development of self-regulation, and an increase in physical activity among students [10-12].

The impact of psychological training should be discussed separately. During the focus groups, many participants in the pilot program noted that working with motivation was a crucial moment for them: “Now I really want to be healthy, I have a

sense of responsibility to myself,” such statements indicate an internal transformation. The formation of conscious motivation for health is a complex process that requires addressing the values and worldview of the individual. Our approach – through group discussions, goals, and support – allowed us to shift these internal guidelines among a significant portion of students (as can be seen from the growing value of health in the survey). This is important because lasting behavioral changes are possible only with intrinsic motivation and conviction. Thus, the psychological component (motivational trainings) should be recognized as a key “catalyst” for the success of the program, which, combined with practical physical activity, gave a comprehensive result.

In the control group, the absence of such effects led to the fact that despite the standard physical education classes, there were no significant lifestyle improvements. This is to be expected, because without targeted work with consciousness, many students continued to treat physical education as a formality. There is a clear contrast between two approaches: traditional, when physical education goes on by itself, and integrated, when it is supported by education and upbringing. Our experiment clearly demonstrates the advantages of the latter: all other things being equal, integration has allowed for deeper changes.

Discussing the limitations of the study, we note that the duration of the experiment (6 months) Although it is sufficient to record the initial results, it is still insufficient to assess the long-term consolidation of healthy habits. It is planned to follow up the same cohort of students after 1-2 years to find out if they will continue to have positive trends without constant external support. Another limitation is the relatively small sample and the experiment conducted at one university. Discussing the limitations of the study, we note that the duration of the experiment (6 months) Although it is sufficient to record the initial results, it is still insufficient to assess the long-term consolidation of healthy habits. It is planned to follow up the same cohort of students after 1-2 years to find out if they will continue to have positive trends without constant external. Another limitation is the relatively small sample and the experiment conducted at one university.; To increase the generalizability of the results, it is advisable to conduct similar studies at other universities, possibly with positive impacts.

Nevertheless, even taking into account these limitations, the results obtained are consistent with the general concept of the need for an interdisciplinary

approach to student health. They show that the university's physical education system has great potential, which is realized by expanding its scope and using methods from the field of pedagogy and psychology [9, p. 17]. The practical value of the work lies in the fact that the developed program can be used in other educational institutions – its elements (lectures on health, motivational trainings, incentive systems for activity, etc.) can be implemented into the educational process at no significant cost, since they are based mainly on organizational decisions and the enthusiasm of teachers.

Conclusion. 1. A theoretically grounded, integrated model that combines physical training with psychological and pedagogical supports is superior to single-track (only PE or only educational) methods for fostering students' value-based attitudes to health and the competencies of a healthy lifestyle.

2. The baseline (constatation) stage revealed insufficient/uneven physical activity and fitness, fragmented health knowledge, predominantly external health motivation, and the presence of some risk behaviors—substantiating the need for a targeted, integrated intervention.

3. A modular, scalable program was designed that synthesizes best practices in PE and education and specifies key psycho-pedagogical conditions—motivational scaffolding, active learning methods, and attention to personal interests—required to cultivate stable health-promoting values and behaviors.

4. The integrated program was feasibly implemented within existing timetables without overload; it achieved high acceptability among students and instructors while maintaining the specified conditions of effectiveness (motivation, active formats, and tutor/curator support).

5. In the experimental group, a relatively short exposure produced clear positive shifts: increased physical activity, improved physical fitness, expanded health knowledge, strengthened intrinsic motivation for a healthy lifestyle, and reduced influence of certain unhealthy habits; no comparable effects were observed in the control group. The working hypothesis was thereby confirmed.

6. Universities should institutionalize the program (or its components) by adding health-lifestyle modules, delivering motivation and self-regulation training for first-year students, and supporting student-led sport-and-health initiatives. These measures are expected to improve student health, cultivate responsible lifestyle self-management, and, in the longer term, enhance professional success and overall quality of life.

An integrated pedagogical approach that unites bodily development with personality education is the most productive pathway for improving youth health in higher education. The study's novelty lies in experimentally validating a holistic program that jointly addresses physical and mental dimensions; its scientific significance is the articulation of concrete psycho-pedagogical conditions for success; and its practical value is the demonstrated feasibility of broad adoption by university PE departments, student-group curators, and campus health centers.

In the future, it is planned to expand this work by conducting long-term monitoring of the sustainability of the effects and exploring the possibility of adapting the integrated program for schoolchildren, as well as for working youth. This will create conditions for the continuous formation of a healthy lifestyle culture at all stages of education, which corresponds to the strategic goals of the nation's recovery.

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INFORMATION ABOUT THE AUTHORS // ИНФОРМАЦИЯ ОБ АВТОРАХ // АВТОРЛАР ТУРАЛЫ АҚПАРАТ

aThe First Author

Turebekov Birzhan – Candidate of Pedagogical Sciences, Head of the Department of Physical Culture and Sports, Zh.A. Tashenev University, Shymkent, Kazakhstan

aПервый автор

Туребеков Биржан Анарбекович – кандидат педагогических наук, заведующий кафедрой «Физическая культура и спорт», Университет им. Ж.А. Ташенева, г. Шымкент, Казахстан.

aБірінші автор

Туребеков Биржан Анарбекович – педагогика ғылымдарының кандидаты, Дене шынықтыру және спорт кафедрасының меңгерушісі, Ж.А. Ташенев атындағы университет, Шымкент қ., Қазақстан.

e-mail: birzhan_2016@mail.ru

bThe Author for Correspondence

Oralbekova Aliya – PhD, Acting Associate Professor, Director of the Department of Science and Innovation at Zh.A. Tashenev University, Shymkent, Kazakhstan

bАвтор для корреспонденции

Оралбекова Алия Курбановна – PhD, и.о. ассоциированного профессора, директор департамента по науке и инновациям, Университет им. Ж.А. Ташенева, г. Шымкент, Казахстан.

bХат-хабарларға арналған автор

Оралбекова Алия Курбановна – PhD, қауымдастырылған профессор м.а., ғылым және инновация департаментінің директоры, Жұмабек Ахметұлы Ташенев атындағы университет, Шымкент қ., Қазақстан.

e-mail: ali.ya84@mail.ru

ORCID: <https://orcid.org/0000-0001-7724-1345>

Makhanbetova Ayaulym – Master’s degree teacher, Zh.A. Tashenev University, Shymkent, Kazakhstan.

Маханбетова Аяулым Қожантаевна – магистр, кафедра «Физическая культура и спорт», Университет им. Ж.А.Ташенева, г. Шымкент, Казахстан.

Маханбетова Аяулым Қожантаевна – магистр, «Дене шынықтыру және спорт» кафедрасы, Ж.А. Ташенев атындағы университет, Шымкент қ., Қазақстан.

e-mail: Makhanbetova198@mail.ru

Yusupov Alymzhan – Master’s degree teacher, Zh.A. Tashenev University, Shymkent, Kazakhstan.

Юсупов Алымжан Равшанович – магистр, кафедра «Физическая культура и спорт», Университет им. Ж.А. Ташенева, г. Шымкент, Казахстан.

Юсупов Алымжан Равшанович – магистр, «Дене шынықтыру және спорт» кафедрасы, Ж.А. Ташенев атындағы университет, Шымкент қ., Қазақстан.

e-mail: yusupov_alymzhan@mail.ru

Taldybek Sunkar – Master’s degree teacher, Zh.A. Tashenev University, Shymkent, Kazakhstan.

Талдыбек Сункар Еркебуланович – магистр, кафедра «Физическая культура и спорт» Университет им. Ж.А. Ташенева, г. Шымкент, Казахстан.

Талдыбек Сункар Еркебуланович – магистр, «Дене шынықтыру және спорт» кафедрасы, Ж.А. Ташенев атындағы университет, Шымкент, Қазақстан.

e-mail: deneshynytyru.kafedrasy@mail.ru

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