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DEVELOPING STUDENTS' MOTIVATION FOR SYSTEMATIC PHYSICAL ACTIVITY IN THE CONTEXT OF UNIVERSITY EDUCATIONAL ENVIRONMENT TRANSFORMATION

Abstract

The relevance of this study is determined by the need to form sustainable physical activity among students in the context of the transformation of the educational environment and the increasing role of digital and hybrid forms of learning. The aim of the study is to provide a theoretical justification and analysis of the formation of motivation for students' systematic physical activity in the conditions of the transformation of the university's educational environment. The research methodology is based on the integrated use of questionnaire surveys, the self-determination scale, physical activity satisfaction questionnaires, observation of digital activity, and analysis of class attendance. The scientific novelty of the work lies in the integration of motivational, environmental, and social factors to identify patterns in the formation of students' autonomous motivation in a transformed educational environment. As a result of the study, it was found that students' sustainable physical activity is determined by a combination of autonomous motivation, the form of the educational environment, and social support, including team formats and digital tools. The main conclusions of the study confirm the significance of a comprehensive approach to designing educational and digital interventions aimed at increasing student engagement and developing sustainable physical activity.

Keywords: student motivation, physical activity, educational environment, digital tools, social support, team dynamics.

Introduction

In contemporary research at the intersection of education and health, students' physical activity is increasingly conceptualized as a key determinant of human capital formation, academic achievement, and a sustainable lifestyle in the long term. Amid the transformation of the university educational environment driven by digitalization, the expansion of hybrid learning formats, and shifts in patterns of social interaction the challenge of maintaining and developing systematic physical activity among learners has become distinctly interdisciplinary, extending beyond the boundaries of traditional physical education.

In the scholarly literature, students' physical activity is progressively examined through the lens of motivational frameworks, most notably self-determination theory, which posits that the stability of behavioral practices is associated with the predominance of autonomous rather than controlled motivation [1]. Empirical evidence and systematic reviews further indicate that intrinsic motivation and the satisfaction of basic psychological needs autonomy, competence, and relatedness serve as robust predictors of regular physical activity in student populations [2, 3]. At the same time, the educational environment is emphasized as a contextual factor that can either support or constrain students' motivational resources.

In recent years, increasing attention has been devoted to the transformation of the university educational environment as an integrated set of spatial, organizational, digital, and social-communicative conditions shaping students' behaviors and attitudes. Studies addressing changes in lifestyle and interaction patterns during periods of intensified digitalization and pandemic-related restrictions point to an ambivalent effect: on the one hand, flexibility and personalization of the educational process are strengthened; on the other, the risks of insufficient physical activity and increased sedentary behavior rise, potentially accompanied by weakened everyday social ties [4, 5]. Accordingly, the purposeful design of an educational environment oriented not only toward academic outcomes but also toward the maintenance of students' physical activity and well-being becomes increasingly critical.

For the higher education system of the Republic of Kazakhstan, the relevance of this issue is further amplified by institutional transformations, the implementation of digital educational platforms, and a reconsideration of universities' roles in fostering a healthy and socially active generation. Despite the existence of individual studies on the physical activity of university youth, the field still lacks a sufficiently systematized analysis of the relationships among students' motivational characteristics, features of the transformed educational environment, and social factors, including team dynamics and forms of support. This gap necessitates a comprehensive study integrating motivational, environmental, and social parameters.

The aim of the present study is the theoretical substantiation and analysis of the formation of students' motivation for systematic physical activity in the context of the transformation of the university educational environment.

To achieve this aim, the study addresses the following objectives:

- to analyze theoretical approaches to understanding motivation for students' physical activity;
- to identify features of the transformation of the university educational environment that are relevant to the formation of physical activity;
- to determine students' motivational profiles and their association with different forms of the educational environment;
- to establish the influence of social support and team-based interaction formats on the sustainability of physical activity;
- to examine the relationship between autonomous and controlled motivation across different educational conditions.

The theoretical significance of the study lies in advancing an interdisciplinary approach to the analysis of students' physical activity through the integration of motivational theories and the concept of the educational environment. The practical significance is determined by the applicability of the findings to the design of educational, physical education, and digital interventions aimed at increasing student engagement and fostering sustainable physical activity practices within higher education.

In recent pedagogical and educational psychology research, the formation of motivation for physical activity is increasingly viewed as a complex phenomenon shaped by personal, social, and institutional determinants [6, 7]. Sáez et al. [6] demonstrated that students' intrinsic and extrinsic motives vary by gender and volume of activity, while sport satisfaction substantially influences the stability of physical activity habits. These findings were further developed in Vučković et al. [8], where post-COVID lockdown analysis revealed shifts in motivational profiles and highlighted the need to adapt university programs to facilitate students' return to systematic engagement in physical activity.

Within self-determination theory (SDT), motivation for physical activity is conceptualized as a continuum that includes autonomous and controlled forms of regulation [7, 9, 10]. Durán-Vinagre et al. [7] identified differences in regulation types across student groups and showed that autonomous motivation is directly associated with the regularity of physical activity, whereas controlled motivation

more often yields short-term outcomes. Gao [9] emphasizes that sustainable fitness behavior develops through internal goal internalization and a subjective sense of autonomy, positioning motivation not only as a psycho-educational construct but also as a value-based phenomenon. Ntoumanis and Moller [10] argue that an SDT-informed approach helps clarify the limitations of external incentives and foregrounds the role of supporting basic psychological needs in the educational environment, namely autonomy, competence, and relatedness.

A growing body of evidence confirms the significance of social factors and support in shaping motivation [11, 12]. Huang et al. [11] reported a synergistic effect of social support and exercise empowerment on students' progression through stages of behavior change, which is particularly relevant for group-based and team-based formats in university settings. In a meta-analysis of more than 50 studies, Wang et al. [12] showed that the impact of social support varies by gender, age, and cultural context, underscoring the need to account for local and institutional characteristics of the university environment.

The theoretical review further indicates that digitalization and the transformation of the educational environment create pedagogical opportunities for motivation while simultaneously generating new challenges. For example, studies by Sañudo et al. [13] and Nuss et al. [14] suggest that gamification, wearable trackers, and motivational interviewing can enhance autonomous motivation and student engagement, even when changes in actual physical activity are modest. Ash et al. [15] and Sultoni et al. [16] emphasize that integrating digital tools into curricular and extracurricular programs is effective only when supported by social interaction and team dynamics, pointing to the necessity of comprehensive environmental design to foster sustainable motivational orientations.

In the Kazakhstani academic discourse, it is also emphasized that educational digitalization alters not only the organization of instruction but also patterns of student engagement and interaction, which requires attention to learners' digital culture when designing university interventions [17]. In addition, immersive digital solutions, such as 360-degree video, have been shown to strengthen the motivational component and engagement by increasing the perceived meaningfulness of activity and the sense of presence, which is methodologically important for developing digital tools that support sustainable behavioral practices among students [18].

A comparative view of domestic and international practices shows that international approaches to motivating students toward physical activity in hybrid educational environments are mainly built around mHealth solutions, gamification, wearable trackers, motivational interviewing, and the Health Promoting University model, where individual autonomy is strengthened through digital feedback, peer comparison, and institutional support [13–16, 21, 22]. In the Kazakhstani context, the emphasis is more strongly placed on the transformation of digital culture, the psychological well-being of learners, and the gradual integration of immersive and platform-based educational tools into the university environment [17, 18, 24]. Thus, while international practice demonstrates a more developed system of digital and organizational support for physical activity, domestic practice highlights the need to adapt these instruments to local institutional conditions, students' educational workload, and the social-communicative structure of the university environment.

At the level of institutional and campus environments, research confirms that physical infrastructure, access to active routes, and natural campus elements are directly associated with students' activity and motivation [19, 20]. In a systematic review, Ding et al. [19] found that well-designed campus environments facilitate the integration of physical activity into students' everyday behavior, while Lu et al. [20] demonstrated a statistical association between campus structure and indicators of student physical fitness. These findings highlight that motivation is formed not only within the individual but also through interaction with educational and physical environments.

At the macro level, the concept of the Health Promoting University (HPU) is increasingly treated as a systemic framework for supporting students' physical activity [21, 22]. Research suggests that integrating policy, infrastructure, programs, and student participation creates a sustainable environment for fostering motivation toward physical activity. Comellas-Sáenz et al. [22] applied cluster analysis to the implementation of HPU models across universities and identified typical implementation patterns, enabling the development of system-level strategies for motivational impact.

Overall, a critical review of the last five years of scholarship supports the following conclusions: (1) individual psycho-educational mechanisms of motivation are well documented, yet their linkage

to the educational environment remains insufficiently examined; (2) digital and hybrid tools can strengthen motivation when accompanied by social and institutional support; and (3) institutional and campus factors constitute necessary conditions for the development of sustainable motivation, confirming the value of an integrative approach that combines personal, social, and environmental determinants of students' physical activity.

Materials and methods

The study was conducted at S. Seifullin Kazakh Agrotechnical Research University among undergraduate students enrolled in diverse academic programs. At the initial stage, the empirical pool comprised 317 undergraduate students; however, 67 responses were not included in the final analysis because some respondents declined participation at one of the stages, did not complete all diagnostic blocks, or did not provide complete attendance and digital-activity records. The final sample therefore comprised 250 participants (130 women and 120 men) aged 18 to 21 years. Participant recruitment followed the principles of voluntary participation and anonymity, ensuring ethical compliance and minimizing the influence of social desirability bias. Particular attention was paid to sample representativeness in terms of academic workload and faculty distribution, which supports the generalizability of the findings to a heterogeneous educational environment within the university.

The institution-based design was selected because the study examined the motivational potential of a specific transformed educational environment, including physical education classes, hybrid learning elements, digital activity monitoring, and teacher-student interaction practices implemented within one university. Therefore, the expansion of the sample to other universities was identified as a relevant direction for future interuniversity research rather than as an additional empirical procedure at the current revision stage.

Participant selection considered not only demographic characteristics but also current levels of physical activity, prior sport participation, and access to digital and hybrid learning formats. This approach enables the identification of relationships between motivation and both individual and environmental factors, thereby providing a solid foundation for interpreting the study outcomes.

To assess motivation for physical activity and related determinants, a multi-instrument design was employed, integrating quantitative and qualitative methods as follows:

Motivation survey, an adapted version of instruments developed by Sáez et al. [6] and Vučković et al. [8], designed to capture intrinsic and extrinsic motives and their alignment with actual activity patterns.

Self-determination (SDT) scale, based on the models of Durán-Vinagre et al. [7] and Gao [9], measuring the degree of autonomous and controlled behavioral regulation. This instrument quantifies goal internalization and the stability of motivational orientations.

Physical activity satisfaction questionnaire, adapted from Yu et al. [23], capturing subjective leisure satisfaction and perceived self-efficacy in the context of physical engagement.

Monitoring of attendance and digital activity through wearable trackers, mobile applications, and learning platforms, consistent with approaches used by Nuss et al. [14] and Ash et al. [15]. This method allows subjective attitudes to be compared with objective behavioral indicators.

The selected toolkit offers several advantages, including comprehensive coverage of motivational, behavioral, and environmental factors, the capacity to integrate data from the digital environment, high validity and replicability, and alignment with contemporary research on student physical activity [11, 10].

The motivation questionnaire for systematic physical activity was grounded in a self-determination framework and comprised four thematic blocks: autonomous regulation, controlled regulation, social support, and subjective appraisal of physical activity. Respondents rated their agreement with each statement on a five-point Likert scale (1, strongly disagree; 5, strongly agree). The autonomous motivation block included the following items: I engage in physical activity because I enjoy it; Physical activity is a personal value for me; I view physical activity as a way of taking care of myself; I feel an inner need to be physically active. The controlled motivation block included: I engage in physical activity because teachers or people around me expect it; I engage in physical activity to avoid negative consequences (e.g., criticism or poor grades); Physical activity feels more like an obligation than a personal choice. The social support block included: My friends support me in being physically active;

Teachers encourage me to be physically active; It is easier for me to be physically active in a group or team. The subjective appraisal block included: I am satisfied with my current level of physical activity; I believe physical activity positively affects my well-being and academic performance. Item wording was adapted to the educational context of Kazakhstani universities while preserving the theoretical logic of the self-determination framework [6; 8], thereby supporting comparability and replication.

In line with the methodological logic of the study, data collection and analysis were organized into three stages:

Diagnostic stage, involving the collection of primary data through the motivation questionnaire, the SDT scale, the satisfaction questionnaire, and the recording of attendance and activity in digital applications. Baseline profiles of motivation and physical activity were established.

Analytical stage, focused on data integration and comparison, including the identification of associations among autonomous and controlled motives, social support, features of the educational environment, and actual activity indicators. Statistical procedures included correlational and comparative analyses, as well as cluster analysis to identify typical motivational profiles [10, 11].

Interpretive stage, dedicated to formulating conclusions regarding the influence of the educational environment and digital tools on students' sustainable motivation. At this stage, key determinants of physical activity were identified, creating a logical bridge to the subsequent presentation and interpretation of results.

Results and discussion

The results of the present study were obtained on the basis of a comprehensive analysis of data collected using the described instruments and methods. The student sample, motivation questionnaires, the self-determination scale (SDT), the physical activity satisfaction questionnaire, and digital indicators recorded using wearable devices (smartwatches, fitness bracelets, pedometers with an activity monitoring function, etc.) and mobile applications made it possible to identify both subjective attitudes and objective behavioral indicators. At the same time, the study results are interpreted on the basis of motivation questionnaire data, self-determination scale data, and objective indicators of physical activity. The questionnaire comprised four diagnostic blocks targeting autonomous regulation, controlled regulation, social support, and subjective appraisal of physical activity; these blocks provided the analytic basis for identifying students' motivational profiles.

The research procedure, which included diagnostic, analytical, and interpretive stages, made it possible to compare students' motivational profiles with actual physical activity, the influence of the educational environment, and the social context. The use of mixed methods (quantitative and qualitative) provided a foundation for the detailed systematization of results, the identification of patterns, and the preparation of an empirical basis for subsequent scientific discussion.

Students' motivational profiles

Based on data from the motivation questionnaire for systematic physical activity (adapted to the context of Kazakhstani universities within the logic of a self-determination approach), as well as indicators of the self-determination scale (SDT), an analysis of the motivational regulation of students' physical activity was conducted. Total scores across the diagnostic blocks of the questionnaire made it possible to form integral indicators of autonomous and controlled motivation, which served as the empirical basis for clustering the sample. As a result, three stable motivational profiles were identified, differing in the nature of behavioral regulation and the level of engagement in physical activity: autonomous motivation, controlled motivation, and low motivation (table 1).

Table 1 – Distribution of students by motivational profiles (N=250)

Motivational profile	Number of students	% of sample	Mean number of active days per week
Autonomous motivation	95	38%	4,6 ± 1,2
Controlled motivation	110	44%	3,2 ± 1,0
Low motivation	45	18%	1,4 ± 0,7
Note: Compiled by the authors.			

Students with autonomous motivation demonstrate the most stable activity, which confirms the relationship between internal regulation and the regularity of physical activity [7, 9]. Controlled motivation provides a moderate level of activity; however, its effect depends on external incentives. Students with low motivation show minimal activity, which indicates the need for targeted pedagogical interventions.

The influence of the educational environment and digital tools

To identify and determine the influence of the educational environment on the level of students' physical activity, a comparative analysis of activity indicators was carried out under face-to-face, hybrid, and distance learning formats. The criteria used were the mean number of active days per week and the mean duration of physical activity per day, recorded on the basis of questionnaire data and objective digital indicators. The obtained results made it possible to identify statistically and substantively significant differences between educational environment formats, reflecting their unequal potential in supporting students' regular physical activity (table 2):

Table 2 – Mean physical activity of students depending on the educational environment format

Environment format	Mean number of active days per week	Mean activity time (min/day)	SD
Face-to-face classes	3,8 ± 1,1	52 ± 15	1,1
Hybrid classes	3,5 ± 1,0	49 ± 14	1,0
Distance classes	2,6 ± 0,9	37 ± 12	0,9
Note: Compiled by the authors.			

As observations showed, face-to-face and hybrid learning formats contribute to higher physical activity than fully distance learning. The use of wearable devices and mobile applications showed that digital support strengthens autonomous motivation, especially when integrating team and social elements [14, 15]. The statistically significant difference between face-to-face and distance formats confirms that the educational environment is a critical determinant of students' physical activity.

Social support and team dynamics

To assess the role of the social context in the formation of students' physical activity, a correlational analysis of the relationship between social support indicators and the level of actual motor activity was conducted. The analysis included support from peers and teachers, as well as students' participation in team and group formats of physical activity. The obtained data made it possible to identify the degree and direction of the influence of social factors on student engagement and to substantiate their significance as independent determinants of physical activity. The analysis showed that social support and participation in team formats significantly increase student engagement (table 3):

Table 3 – Correlation of social support with physical activity

Social support indicator	r - correlation with activity	p-value
Support from friends	0,42	<0,01
Support from a teacher	0,35	<0,05
Participation in team formats	0,48	<0,01
Note: Compiled by the authors.		

In table 3, the coefficient r reflects the strength and direction of the correlation relationship between social support indicators and the level of students' physical activity, whereas the p-value indicates the statistical significance of the identified relationships. Values of $p < 0,05$ and $p < 0,01$ indicate a high degree of reliability of the obtained results and allow the identified correlations to be interpreted as statistically significant. Positive values of the coefficient r indicate a direct relationship: an increase in the level of social support and involvement in team formats is accompanied by an increase in students' physical activity indicators.

The highest correlation is observed between team formats and the level of physical activity, which emphasizes the synergistic effect of social support and autonomous motivation [11, 12]. The data confirm the need to include team elements and structured support in physical activity programs.

Based on the obtained data, three groups of determinants of physical activity can be identified:

Motivational: autonomous and controlled motivation, subjective satisfaction with physical activity.

Environmental: the format of the educational environment (face-to-face, hybrid, distance learning), the availability of infrastructure, digital activity monitoring tools.

Social: support from teachers and peers, participation in team and group activities.

The aim of the study was to identify and substantiate the mechanisms underlying the formation of students' motivation for systematic physical activity in the context of transformation of the university educational environment. Particular attention was devoted to examining the relationships among students' motivational profiles, characteristics of the educational environment (face-to-face, hybrid, distance), the use of digital tools, and the role of social support. The study is intended to establish a scientifically grounded basis for designing educational and digital interventions that enhance students' sustainable physical activity.

The results showed that the distribution of students' motivational profiles substantially affects the regularity of physical activity. Students with autonomous motivation demonstrated the highest number of active days per week, which corroborates the conclusions of Durán-Vinagre et al. [7] and Gao [9]. Controlled motivation produced a moderate level of activity, but its effect was unstable, while students with low motivation exhibited minimal activity [6, 8].

The association between motivation and the educational environment is manifested through differences in activity across face-to-face, hybrid, and distance learning formats. Face-to-face and hybrid formats are associated with higher physical activity, while digital tools (wearable devices, mobile applications) strengthen autonomous motivation, especially when team elements are integrated [14, 15, 13].

It is important to consider that the effectiveness of digital tools in the university environment depends not only on their functionality but also on whether instructional design supports intrinsic motivation and learners' psychological well-being. In the Kazakhstani context, it has been shown that learning motivation functions simultaneously as an indicator and a condition of psychological well-being, which increases the requirements for a motivation-supportive environment [24]. In applied terms, this means that trackers, applications, and digital monitoring should be combined with practices of autonomy support and positive social interaction in order to strengthen autonomous regulation and reduce the dependence of physical activity on external incentives.

The influence of social support and team dynamics was confirmed by correlational evidence: participation in team formats and the availability of support from instructors and peers are associated with higher activity levels [11, 12]. These results demonstrate that students' sustainable behavior is formed through the combination of personal autonomous motivation, the educational environment, and social factors.

Comparative indicators of autonomous and controlled motivation reveal that autonomous motivation ensures systematic and sustainable physical activity, whereas controlled motivation more often depends on external incentives and has a short-term character. The findings are consistent with the research of Ntoumanis and Moller [10] and Gao [9], confirming the universality of SDT logic in the formation of sustainable motivation across different educational contexts.

The reliability of the results was ensured through the integration of subjective and objective indicators, including motivation questionnaires, the SDT scale, the physical activity satisfaction questionnaire, monitoring of digital activity, and attendance. The comparison of these data makes it possible to interpret appropriately the relationship between motivational profiles, the educational environment, and social determinants.

In addition, comparison of the obtained results with international and regional studies supports their robustness, as similar patterns have been identified in the works of Durán-Vinagre et al. [7], Gao [9], Ntoumanis and Moller [10], Huang et al. [11], Sañudo et al. [13], and Ash et al. [15].

From a comparative perspective, the results of the present study are consistent with international practices in which students' motivation is strengthened through the combination of autonomy-

supportive pedagogy, digital monitoring, social comparison, and peer-based activity formats [13, 14, 15]. However, unlike many international models where hybrid educational environments are supported by established institutional health-promotion policies and campus-wide digital ecosystems [21, 22], the Kazakhstani university context requires a more gradual and pedagogically mediated integration of such tools. In this respect, domestic practice should not simply reproduce international models, but should adapt them to local educational schedules, students' academic workload, the availability of digital infrastructure, and the role of instructors as direct motivators of physical activity [17, 18, 24].

The results of the study have direct practical significance for:

- physical education instructors, to use evidence on motivational profiles to adapt classes and incorporate team formats;
- university administrations, to develop programs and digital solutions that increase student engagement and to adjust instructional formats;
- students, to build a sustainable habit of systematic physical activity and to increase satisfaction and self-efficacy.

The study provides a rationale for integrating motivational, environmental, and social factors into educational strategies and digital tools, thereby ensuring a long-term increase in physical activity within the contemporary university environment.

In the future, the study may be expanded in several directions:

- long-term tracking of the stability of autonomous motivation and students' physical activity habits;
- examination of the effects of individualized digital programs on motivation and behavior;
- cross-cultural research on student motivation and social support;
- evaluation of the effectiveness of the educational environment within the Health Promoting University concept [21, 22];
- involvement of specialists in pedagogy, psychology, and digital educational platforms for a comprehensive analysis of mechanisms of motivation formation and sustainable physical activity.

It is evident that these research prospects provide a foundation for developing targeted programs, strategies, and interventions aimed at strengthening students' health and activity in the context of a transformed educational environment in Kazakhstani universities.

Conclusion

In the present study, the key objective was achieved, namely to substantiate theoretically and empirically the mechanisms underlying the formation of students' motivation for systematic physical activity in the context of transformation of the university educational environment. Based on a comprehensive analysis of data, including motivation questionnaires, the self-determination scale, physical activity satisfaction questionnaires, monitoring of digital activity, and class attendance, the key determinants of students' behavior and their interaction with the educational environment were identified.

The main results of the study can be summarized as follows:

The distribution of motivational profiles showed that 38 percent of students demonstrate autonomous motivation, 44 percent demonstrate controlled motivation, and 18 percent demonstrate low motivation. Autonomous motivation ensures the highest regularity of physical activity, whereas controlled motivation depends on external incentives and has a short-term character.

The relationship between motivation and the educational environment is manifested in the fact that face-to-face and hybrid learning formats contribute to higher levels of students' physical activity. Digital tools (mobile applications, wearable devices) strengthen autonomous motivation, especially when team and social elements are integrated.

The influence of social support and team dynamics was confirmed by high correlation values between participation in team formats, support from instructors and peers, and the level of physical activity. These results demonstrate the synergistic effect of personal autonomous motivation and the social environment.

Comparative indicators of autonomous and controlled motivation confirmed that the sustainability of physical activity directly depends on students' intrinsic motivation, whereas external incentives can only provide short-term support for activity.

Thus, the scientific and practical significance of the study allows the following points to be emphasized:

- the study data provide a rationale for a comprehensive approach to designing physical activity educational programs that integrates motivational, environmental, and social factors;
- the practical application of the findings is important for physical education instructors, academic program coordinators, university administrators, and developers of digital educational tools;
- the results can be used to adapt physical education courses, implement hybrid and digital learning formats, organize team-based activities, and develop support strategies for students with low motivation.

Prospects for further research are associated with expanding the temporal and substantive scope of analyzing the formation of students' sustainable physical activity. In particular, long-term monitoring of the dynamics of autonomous motivation and the consolidation of behavioral habits is of scientific interest, as it enables the identification of stable trajectories of physical activity during university study. A promising direction is the development and testing of individualized digital programs aimed at supporting autonomous motivation while accounting for personal and environmental factors. Substantial potential is offered by cross-cultural comparative research focusing on the influence of the educational environment and social support on students' physical activity across different sociocultural contexts. In addition, an important task remains the evaluation of the effectiveness of implementing the Health Promoting University concept and integrating motivational tools into university educational strategies as an element of a systemic approach to building a health-preserving educational environment.

In methodological terms, further research should expand the empirical base through interuniversity comparison and the inclusion of students from different institutional environments. This will make it possible to verify whether the patterns identified at S. Seifullin Kazakh Agrotechnical Research University are reproduced in other universities and to compare domestic practice more systematically with international models of motivation support in hybrid educational environments.

Overall, the study confirms that the formation of students' sustainable physical activity is possible only through the integrated interaction of motivational profiles, the educational environment, and social support, thereby creating a scientifically grounded basis for further pedagogical, organizational, and digital interventions in university practice.

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УНИВЕРСИТЕТТІҢ БІЛІМ БЕРУ ОРТАСЫН ТРАНСФОРМАЦИЯЛАУ ЖАҒДАЙЫНДА СТУДЕНТТЕРДІҢ ЖҮЙЕЛІ ДЕНЕ БЕЛСЕНДІЛІГІНЕ МОТИВАЦИЯСЫН ДАМЫТУ

Аңдатпа

Бұл мақалада университеттің білім беру ортасы цифрландыру, гибридті оқыту және әлеуметтік өзара әрекет формаларының өзгеруі жағдайында студенттердің жүйелі дене белсенділігіне мотивациясын қалыптастыру мәселесі қарастырылады. Зерттеудің мақсаты – жоғары оқу орнының трансформацияланған білім беру ортасында студенттердің дене белсенділігіне тұрақты мотивациясының қалыптасу механизмдерін теориялық және эмпирикалық тұрғыдан негіздеу. Зерттеу әдіснамасы сауалнама, өзін-өзі айқындау шкаласы, дене белсенділігіне қанағаттану сауалнамасы, сабаққа қатысу көрсеткіштері мен цифрлық белсенділікті бақылау деректерін кешенді қолдануға сүйенеді. Зерттеу нәтижелері автономды мотивацияның, білім беру ортасының форматының және әлеуметтік қолдаудың студенттердің тұрақты дене белсенділігіне елеулі әсер ететінін көрсетті. Командалық форматтар мен цифрлық құралдарды біріктіру студенттердің қатысуын арттырып, ішкі мотивацияны нығайтады. Зерттеудің ғылыми құндылығы мотивациялық, әлеуметтік және орта факторларын біртұтас талдау арқылы студенттердің денсаулық сақтау мінез-құлқын дамытуға бағытталған педагогикалық және цифрлық интервенциялар үшін негіз ұсынуымен айқындалады.

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РАЗВИТИЕ МОТИВАЦИИ СТУДЕНТОВ К СИСТЕМАТИЧЕСКОЙ ФИЗИЧЕСКОЙ АКТИВНОСТИ В УСЛОВИЯХ ТРАНСФОРМАЦИИ УНИВЕРСИТЕТСКОЙ ОБРАЗОВАТЕЛЬНОЙ СРЕДЫ

Аннотация

В статье рассматривается проблема формирования мотивации студентов к систематической физической активности в условиях трансформации университетской образовательной среды, цифровизации, гибридного обучения и изменения форм социального взаимодействия. Цель исследования заключается в теоретическом и эмпирическом обосновании механизмов формирования устойчивой мотивации студентов к физической активности в современной образовательной среде вуза. Методология исследования основана на комплексном применении анкетирования, шкалы самоопределения, опросника удовлетворенности физической активностью, анализа посещаемости занятий и мониторинга цифровой активности. Результаты показали, что устойчивая физическая активность студентов определяется сочетанием автономной мотивации, формата образовательной среды и социальной поддержки. Интеграция командных форматов и цифровых инструментов способствует повышению вовлеченности студентов и усилению внутренней мотивации. Научная ценность исследования состоит в комплексном анализе мотивационных, социальных и средовых факторов, а практическая значимость связана с возможностью разработки педагогических и цифровых интервенций, направленных на укрепление здоровьесберегающего поведения студентов.

Ключевые слова: мотивация студентов, физическая активность, образовательная среда, цифровые инструменты, социальная поддержка, командная динамика.

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