# DEVELOPMENT OF A PHYSICAL HEALTH MANAGEMENT SYSTEM FOR ADULTS AND CHILDREN: CURRENT ORGANIZATIONAL AND METHODOLOGICAL ASPECTS

Ushakov IB1, Turzin PS2, Lukichev KE3<sup>™</sup>, Popov VI4

- <sup>1</sup> Burnasyan Federal Medical Biophysical Center of the Federal Medical Biological Agency, Moscow, Russia
- <sup>2</sup> Healthcare Organization and Medical Management Research Institute of the Moscow City Healthcare Department, Moscow, Russia
- <sup>3</sup> Financial University under the Government of the Russian Federation, Moscow, Russia
- <sup>4</sup> Burdenko Voronezh State Medical University, Voronezh, Russia

Currently, given the high risk of exposure of the country's population to various adverse factors in the context of everyday life, it is important to promote efforts aimed at improvement of the people's health, its physical aspect in the first place. Establishing the state of the population's physical health management system is a significant part of this process. This study aimed to look into the current organizational and methodological aspects of the development of the physical health management system designed for adults and children in the regions of the country. For this purpose, we surveyed heads of regional government bodies using a 40-item questionnaire that had both multiple choice and grid-in questions. The questionnaires were sent to all regions of the country; 59 of them got filled by the respective officials and returned. The filled questionnaires were subsequently systematized and processed. Having analyzed the responses received, we classified the promoting and limiting factors that affect the development of the adults and children physical health management system. This exercise was designed to yield data needed to support the development of the national (regional, municipal) system underpinning physical culture and sports popularization, the GTO movement (Ready for Labor and Defense), and training of elite athletes. We have also prepared the "Classification of examples of the best management solutions," the "Consolidated list of proposals to improve the regional physical health management system for adults and children," and the "Collection of assistance requests issued by the regions to the federal authorities." Thus, analyzing the responses from the participating regions allowed learning their experience in managing the physical health of both adults and children.

Keywords: organizational and methodological aspects, physical health management system, adults and children, regions, health

Author contribution: Ushakov IB — literature analysis, article text preparation, authoring, and editing; Turzin PS, Lukichev KE — source data collection and analysis, article text preparation and authoring; Popov VI — literature data collection and analysis, article text preparation and authoring. All authors confirm conformity of their parts to the international ICMJE criteria (all authors have made a significant contribution to the development of study's concept, its conduct, and article authoring; all authors have read and approved the final version thereof before publication).

Compliance with ethical standards: representatives of the regions participated in the study voluntarily.

Correspondence should be addressed: Konstantin E. Lukichev Leningradsky prospekt, 49/2, Moscow, 125167, Russia; lukichev.lkl@gmail.com

Received: 19.05.2025 Accepted: 11.06.2025 Published online: 07.09.2025

DOI: 10.24075/rbh.2025.134

# СОВРЕМЕННЫЕ ОРГАНИЗАЦИОННЫЕ И МЕТОДОЛОГИЧЕСКИЕ АСПЕКТЫ РАЗВИТИЯ СИСТЕМЫ УПРАВЛЕНИЯ ФИЗИЧЕСКИМ ЗДОРОВЬЕМ ВЗРОСЛЫХ И ДЕТЕЙ

- 1 Федеральный медицинский биофизический центр имени А. И. Бурназяна Федерального медико-биологического агентства России, Москва, Россия
- <sup>2</sup> Научно-исследовательский институт организации здравоохранения и медицинского менеджмента Департамента здравоохранения города Москвы, Москва, Россия
- <sup>3</sup> Финансовый университет при правительстве Российской Федерации, Москва, Россия
- 4 Воронежский государственный медицинский университет имени Н. Н. Бурденко, Воронеж, Россия

В настоящее время в условиях высокого риска воздействия на население страны различных неблагоприятных факторов жизнедеятельности большое значение приобретают вопросы улучшения здоровья населения, прежде всего физического. В связи с этим значительную роль играет определение состояния системы управления физическим здоровьем населения регионов страны. Целью исследования было изучить современные организационные и методологические аспекты развития системы управления физическим здоровьем взрослых и детей в регионах страны. Для этого был выполнен опрос руководителей органов управления регионов с использованием анкеты, состоявшей из 40 вопросов и позволявшей отвечать на вопросы, как используя варианты ответов, так и произвольно. Такие анкеты были направлены во все регионы страны. Полученные от руководителей органов управления 59 регионов ответы были систематизированы и обработаны. На основании анализа полученных ответов в интересах развития национальной (региональной, муниципальной) системы физической культуры, массового спорта, ГТО и спорта высших достижений в регионах систематизированы факторы, как сдерживающие, так и способствующие развитию системы управления физическим здоровьем взрослых и детей в регионе», а также «Свод запросов регионов о помощи, которая требуется им со стороны федеральных органов власти». Таким образом, анализ полученных из принявших участие в опросе регионов страны ответов позволил изучить опыт регионов по управлению физическим здоровьем взрослых и детей.

Ключевые слова: организационные и методологические направления, система управления физическим здоровьем, взрослые и дети, регионы, здоровье

Вклад авторов: И. Б. Ушаков — анализ литературных источников, подготовка и написание текста статьи, редактирование статьи; П. С. Турзин, К. Е. Лукичев — сбор и анализ исходных данных, подготовка и написание текста статьи; В. И. Попов — сбор и анализ литературных источников, подготовка и написание текста статьи. Все авторы подтверждают соответствие своего авторства международным критериям ICMJE (все авторы внесли существенный вклад в разработку концепции, проведение исследования и подготовку статьи, прочли и одобрили финальную версию перед публикацией).

Соблюдение этических стандартов: участие представителей регионов в опросе было добровольным.

Для корреспонденции: Константин Евгеньевич Лукичев

Ленинградский пр-т, д. 49/2, г, Москва, 125167, Россия; lukichev.lkl@gmail.com

Статья получена: 19.05.2025 Статья принята к печати: 11.06.2025 Опубликована онлайн: 07.09.2025

DOI: 10.24075/rbh.2025.134

As a specific subject matter, management of the system for maintaining, strengthening, and improving physical health is being actively studied both in our country [1, 2] and abroad [3-8]. A number of domestic and foreign studies investigated the features of the development of physical health from medical, psychological, and economic perspectives [9-10], as well as the relationship between physical and mental health [11–15], and some have considered physical health as a component of a healthy lifestyle [16, 17] under normal and altered conditions (in the context of digitalization) [18]. Physical development components of corporate programs designed and implemented to strengthen health of the employees are an important part of the overall related efforts [19, 20]. The significance of measures aimed at preserving physical health of the population from childhood is recognized both in the Russian Federation (RF) and abroad [21-25]. In this regard, understanding the development of physical health management system is an important task from both the national economic and social perspectives. Therefore, we conducted a special study that looked into the current organizational and methodological approaches applied at the regional level to the development of the said system, which is designed for both children and adults.

## **METHODS**

Seeking to assess the performance of regional and municipal authorities in developing organizational, methodological, scientific and practical foundations that would underpin the system for managing the physical health of adults and children, and also aiming to learn about the experience of large companies, we sent to 89 regions of the country a 40-item questionnaire designed to collect current information. The questionnaire allowed making suggestions.

The results of this survey were processed in several stages, all revolving around the analysis and interpretation of the collected data with the aim to identify patterns, trends, and to form reasonable conclusions. Methodologically, the process included various approaches: statistical analysis to reveal mathematical patterns and correlations between indicators; cluster analysis to group respondents according to various criteria to determine common trends; factor analysis to investigate the influence of various factors on the final indicators; text analysis to process open responses.

## **RESULTS**

The addressees in this study were representatives of local authorities; the filled questionnaires providing current information, containing answers to questions as well as suggestions from the regional executive branch officials were received from 59 subjects of the Russian Federation, which is more than two thirds (68.4%) of the total number of regions of the country. In general, this fact indicates that the heads of executive government agencies on the considered level pay significant attention to the urgent and important social, economic and medical problem of managing the physical health of adults and children.

The respondents were officials holding various positions in regional ministries (committees, departments, and complexes) responsible for managing matters related to physical culture and sports, healthcare, education, and social development. A single region could have several employees of the governing bodies participating in the study.

At the same time, representatives of organizations subordinate to regional government bodies participated in the preparation of responses to the questionnaires.

Overall, this fact indicates that the involved heads of executive government agencies intentionally focus on the the urgent and important social, economic and medical problem of managing the physical health of adults and children.

It should be noted that in the tables giving the results of the survey question by question, the total number of responses in percents may exceed 100%, since some of the questionnaire items allowed choosing several response options.

Table 1 gives the results of the analysis of the regions' responses to the question "Which of the main directions of development of methodology and technologies for managing the physical health of adults and children in the context of developing a national (regional, municipal) system of promotion of physical culture, popularization of sports, GTO, and training of elite athletes are being implemented in your region (short-term)?".

Thus, the regions pay the most attention to the implementation of regional (municipal, corporate, territorial) programs with the aim to develop the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes., then regional (municipal, industrial, territorial) projects, then methodological documents, then pilot projects, and, finally, the development and implementation of new organizational and information and communication technologies.

Table 2 gives the regions' responses to the question "What conditions have been created in the interests of developing the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in your region?"; the responses revealed a well-developed regional infrastructure serving the development of the said system.

Table 1. The main directions of development of methodology and technologies for managing the physical health of adults and children in the context of developing a national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes (short-term)

Nº	Directions of development	Quantity (%)
1	Implementation of a regional (municipal, corporate, territorial) project	59.3
2	Implementation of a regional (municipal, corporate, territorial) program	77.9
3	Development and implementation of corporate programs	22
4	Implementation of methodological documents	50.8
5	Development and implementation of new organizational technologies	25.4
6	Development and implementation of new information and communication technologies	23.7
7	Pilot projects	37.3
8	International cooperation	16.9
9	Other	16.9

# ORIGINAL RESEARCH

Table 2. The results of the regions' responses to the question "What conditions have been created in the interests of developing the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in your region?"

Nº	Terms	Number of regions (%)
1	Availability of stadiums	100
2	Availability of swimming pools	98.3
3	Availability of sports grounds	100
4	Availability of sports centers	93.2
5	Availability of fitness centers	84.8
6	Availability of sports clubs	96.7
7	Availability of sports schools for children and youth	98.3
8	Conducting sports events	100
9	Implementation of specialized corporate programs	72.9
10	Availability of coaching staff	98.3
11	Availability of medical support	91.5
12	Creation of optimal sanitary, hygienic, ecological, and ergonomic conditions for the development of the national (regional, municipal, corporate, territorial) system of physical culture and sports popularization, the GTO movement, and training of elite athletes	81.4

The analysis of the filled questionnaires also allowed identifying the main factors currently somewhat constraining the development of the physical health management system for adults and children in the regions. We compiled the "Consolidated list of factors that currently hinder the management of the physical health of adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in the regions of the country"; it includes the factors in the following areas: the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes; regional infrastructure for physical culture and sports activities; availability of experts specializing in physical culture, health improvement, and sports for the masses; medical support; motivation of managers; motivation of the population; financial support; existing restrictions.

As for the factors that promote the development of the regional physical health management system for adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes, they are as follows:

- issues related to boosting the motivation of citizens to engage in systematic physical culture and sports activities, and to lead a healthy lifestyle;
  - development of sports infrastructure;
- organization of physical culture and sports events, including major national and international competitions with increased audience reach;
- support and development of professional clubs (hockey, football, futsal, volleyball, basketball, etc.);
- creation of infrastructure (swimming pools) in the northern regions to teach children to swim and to give the population an opportunity to practice swimming systematically, including people with disabilities;
- improvement of the situation with procurement of resources in the field of physical culture and sports;
  - additional funding, etc.

The regions' responses to the question "What impact has the introduction of digitalization had on the physical health management system for adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in your region?" showed that for 72.9% of them, this process is a positive influence.

#### DISCUSSION

Having analyzed the responses received, we compiled the "Classification of examples of the best management solutions at the level of the subject of the Russian Federation related to the motivation of managers at various levels to oversee the efforts aimed at maintaining and improving physical health of adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in the regions"; the classification included solutions in the fields of organization; introduction of the new types of sports and events; introduction of the new types of grants, ratings, and competitions; introduction of the new ways of work; establishment of the new performance indicators; introduction of the new motivational measures and insignia; financial support; medical care; promotion and popularization of physical culture and sports.

We have also compiled the "Consolidated list of proposals aimed at improvement of the physical health management system for adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes in the regions of the country"; this list covered the following areas: regulatory documents; organizational matters; the GTO system; sport for the masses; healthy lifestyle; corporate programs; education and training; informatization and digitalization; economic aspects; motivational aspects; propaganda.

In addition, the analysis of the filled questionnaires allowed identifying what type of assistance the regions of the country need from the federal authorities for successful development of the physical health management system for adults and children. We compiled the "Collection of assistance requests from the regions to the federal authorities related to the successful management of the physical health of adults and children in the context of development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes"; the requests pertain to the following areas: legislative support; administrative support at the federal level; improvement of infrastructure; education and training; methodological support; medical support; motivation of managers and the population; financial support; propaganda and mass media.

The results of the analysis of the responses from the representatives of the regions revealed the following: 76.3%

# ОРИГИНАЛЬНОЕ ИССЛЕДОВАНИЕ

of the regions believe that use of adults and children's physical health management technologies in the context of development of the national (regional, municipal) system of promotion of physical culture, popularization of sports, GTO, and training of elite athletes in their regions contributes to the "preservation of healthy labor resources," and 49.1% of the regions believe that it contributes to "labor productivity growth." According to 47.5% of regions, such technologies help to "improve the image," while 42.4% of the regions claim they "reduce the volume of sick leaves," 20.3% of the regions — "reduce staff turnover", and 18.7% of the regions believe the technologies "reduce the number of accidents." A different answer was received from 5.1% of the regions.

As for the corporate entities, their efforts in the field of managing the physical health of adults and children yielded the following achievements: organized and conducted sports days and competitions both within one company and for several companies; support to sports and the corporate sports movement; a number of enterprises organize various corporate sports and recreation and mass sports events for their employees and their family members. Local authorities assist in organization of such events. Companies also develop and implement specialized corporate health promotion programs, including corporate programs for the development of physical culture and sports; promote and encourage the GTO system among their employees; conduct corporate games, departmental competitions (cross-country tracking, cross-country skiing, etc.), contests to establish the best corporate programs designed to involve employees in sports and a healthy lifestyle.

The proposals of the representatives of the regions related to the development of corporate programs include the following:

- development and implementation of mandatory corporate programs for the development of physical culture and sports;
- development of corporate sports through mass-oriented sports popularization efforts in companies of all patterns of ownership;

extension of the Healthy Municipality program, implementation
 of corporate employee health promotion programs at all companies;
 development of corporate sports, etc.

#### **CONCLUSIONS**

The analysis of the responses received from 59 regions of the country revealed the main factors currently somewhat constraining the development of the adults and children's physical health management system in the regions; a number of factors contributing to the development of the said system; the types of assistance the regions need from the federal authorities for successful development of the national (regional, municipal) system of physical culture and sports popularization, the GTO movement, and training of elite athletes.

Based on the data obtained, we have also compiled the the "Classification of examples of the best management solutions at the level of the subject of the Russian Federation related to the motivation of managers at various levels to oversee the efforts aimed at maintaining and improving physical health of adults and children in the region," the "Consolidated list of proposals to improve the regional physical health management system for adults and children," and the "Collection of assistance requests from the regions to the federal authorities related to the successful management of the physical health of adults and children."

Another subject investigated in this study was the experience of large companies in the country's regions in what concerns management of the physical health of adults and children.

The analysis of the results of the survey clearly demonstrates the urgent need to intensify the work of the executive authorities at the level of the subjects of the Russian Federation that addresses organizational and socio-economic problems of further development of the system of physical culture and sports popularization, the GTO movement, and training of elite athletes in the regions of the country.

## References

- Aksenova El, Kamynina NN, Turzin PS. Gorodskoj stress zhitelja megapolisa: stressogennye faktory i korrekcija. Problemy social'noj gigieny, zdravoohranenija i istorii mediciny. 2023; 31 (S2): 1087–91 (in Rus.). DOI: 10.32687/0869-866X-2023-31-s2-1087-1091.
- Krugljakova JeV, Korobejnikova El. Fizicheskoe zdorov'e kak osnova dolgoj i aktivnoj zhizni cheloveka. Nauka-2020. 2021; 7 (52): 27–32 (in Rus.).
- Kovalev SP, Jashina ER, Turzin PS, Lukichev KE. Osobennosti sovremennogo medicinskogo obespechenija sportivnoj dejatel'nosti za rubezhom. Teorija i praktika fizicheskoj kul'tury. 2024; (3): 85–7 (in Rus.).
- Korenhof SSA, van Grieken AA, Franse CCB, Tan SSSS, Verma AA, Alhambra TT, et al. The association of fear of falling and physical and mental Health-Related Quality of Life (HRQoL) among community-dwelling older persons; a cross-sectional study of Urban Health Centres Europe (UHCE). BMC Geriatr. 2023; 23 (1): 291. DOI: 10.1186/s12877-023-04004-y.
- Launders N, Hayes JF, Price G, Osborn DP. Clustering of physical health multimorbidity in people with severe mental illness: An accumulated prevalence analysis of United Kingdom primary care data. PLoS Med. 2022; 19 (4): e1003976. DOI: 10.1371/journal.pmed.1003976.
- Navarra GA, Tabacchi G, Scardina A, Agnese M, Thomas E, Bianco A, et al. Functional fitness, lifestyle and demographic factors as predictors of perceived physical and mental health in older adults: A structural equation model. PLoS One. 2023; 18 (9): e0290258. DOI: 10.1371/journal.pone.0290258.

- Stock NM, Costa B, Wilkinson-Bell K, Culshaw L, Kearney A, Edwards W. Psychological and physical health outcomes in adults with craniosynostosis. Cleft Palate Craniofac J. 2023; 60 (3): 257– 67. DOI: 10.1177/10556656211059966.
- Wang S, Zhang C, Xu W. Mindfulness, mortality, disability rates, physical and mental health among the oldest old. Health Psychol. 2023; 42 (10): 746–55. DOI: 10.1037/hea0001315.
- Kovalev SP, Voronin VN, Jashina ER, Turzin PS, Lukichev KE. Organizacionnye, metodologicheskie i medicinskie aspekty upravlenija fizicheskim zdorov'em i sportivnoj podgotovkoj. M.: Grifon, 2024; 500 p.(in Rus.).
- Poljakova OB, Bonkalo TI. Fizicheskoe zdorov'e: dajdzhest [jelektronnyj resurs]. M.: GBU "NIIOZMM DZM", 2023; 58 p. (in Rus.).
- Aksenova El, Kamynina NN, Turzin PS. Analiz vzaimosvjazi fizicheskogo i psihicheskogo zdorov'ja naselenija za rubezhom: obzor. Sovremennye problemy zdravoohranenija i medicinskoj statistiki. 2024; (2): 87–112 (in Rus.). DOI: 10.24412/2312-2935-2024-2-87-112.
- Agbangla NF, Séba MP, Bunlon F, Toulotte C, Fraser SA. Effects of physical activity on physical and mental health of older adults living in care settings: A systematic review of meta-analyses. Int J Environ Res Public Health. 2023; 20 (13): 6226. DOI: 10.3390/ijerph20136226.
- Alosaimi N, Sherar LB, Griffiths P, Pearson N. Clustering of diet, physical activity and sedentary behaviour and related physical and mental health outcomes: a systematic review. BMC Public Health. 2023; 23 (1): 1572. DOI: 10.1186/s12889-023-16372-6.

- Bencsik P, Halliday TJ, Mazumder B. The intergenerational transmission of mental and physical health in the United Kingdom. J Health Econ. 2023; (92): 102805. DOI: 10.1016/j.jhealeco.2023.102805.
- Bernstein DN, Lans A, Karhade AV, Heng M, Poolman RW, Schwab JH, et al. Are detailed, patient-level social determinant of health factors associated with physical function and mental health at presentation among new patients with orthopaedic conditions? Clin Orthop Relat Res. 2023; 481 (5): 912–21. DOI: 10.1097/CORR.00000000000002446.
- Turzin PS, Gurylina MV, Aksenova EI, Hodyreva LA, Bogdan IV, Chistjakova DP. Sozdanie organizacionnyh uslovij dlja formirovanija zdorovogo obraza zhizni u naselenija. Problemy social'noj gigieny, zdravoohranenija i istorii mediciny. 2019; 27 (5): 704–9 (in Rus.). DOI: 10.32687/0869-866X-2019-27-si1-704-709.
- Ushakov IB, Turzin PS, Popov VI. Stress. Pandemii. Konflikty. Dolgoletie.
  M.: Nauchnaja kniga, 2023; 274 p. (in Rus.).
- Rjabova NV. Cifrovizacija otrasli fizicheskoj kul'tury i sporta v Respublike Marij Jel. Nauchnyj lider. 2024; 7 (157). (In Rus.). URL: https://scilead.ru/article/6009-tsifrovizatsiya-otrasli-fizicheskoj-kulturi-i.
- Kovalev SP, Jashina ER, Ushakov IB, Turzin PS, Lukichev KE, Generalov AV. Korporativnye programmy ukreplenija professional'nogo zdorov'ja rabotnikov v Rossijskoj Federacii. Jekologija cheloveka. 2020; (10): 31–7 (in Rus.). DOI: 10.33396/1728-0869-2020-10-31-37.

- 20. Jashina ER, Lukichev KE, Generalov AV, Turzin PS. Osobennosti razrabotki i vnedrenija korporativnyh programm ukreplenija zdorov'ja rabotnikov v regionah strany. Teorija i praktika fizicheskoj kul'tury. 2021; (12): 78–9 (in Rus.).
- Kovalev SP, Jashina ER, Turzin PS, Lukichev KE. Osobennosti medicinskogo obespechenija sportsmenov — detej i podrostkov za rubezhom. Teorija i praktika fizicheskoj kul'tury. 2024; (5): 88– 90 (in Rus.).
- 22. Breslin G, Hillyard M, Brick N, Shannon S, McKay-Redmond B, McConnell B. A systematic review of the effect of The Daily Mile™ on children's physical activity, physical health, mental health, wellbeing, academic performance and cognitive function. PLoS One. 2023; 18 (1): e0277375. DOI: 10.1371/journal.pone.0277375.
- 23. Jones EJ, Schreier HMC. Self-rated mental and physical health are prospectively associated with psychosocial and academic adjustment to college. J Am Coll Health. 2023; 71 (3): 715–24. DOI: 10.1080/07448481.2021.1904956.
- Yang L, Corpeleijn E, Hartman E. A prospective analysis of physical activity and mental health in children: the GECKO Drenthe cohort. Int J Behav Nutr Phys Act. 2023; 20 (1): 114. DOI: 10.1186/s12966-023-01506-1.
- Yao B, Takata SC, Mack WJ, Roll SC. Modeling extracurricular activity participation with physical and mental health in college students over time. J Am Coll Health. 2023; 71 (4): 1232–40. DOI: 10.1080/07448481.2021.1926263.

## Литература

- 1. Аксенова Е. И., Камынина Н. Н., Турзин П. С. Городской стресс жителя мегаполиса: стрессогенные факторы и коррекция. Проблемы социальной гигиены, здравоохранения и истории медицины. 2023; 31 (S2): 1087–91. DOI: 10.32687/0869-866X-2023-31-s2-1087-1091.
- 2. Круглякова Э. В., Коробейникова Е. И. Физическое здоровье как основа долгой и активной жизни человека. Наука-2020. 2021; 7 (52): 27–32.
- 3. Ковалев С. П., Яшина Е. Р., Турзин П. С., Лукичев К. Е. Особенности современного медицинского обеспечения спортивной деятельности за рубежом. Теория и практика физической культуры. 2024; (3): 85–7.
- Korenhof SSA, van Grieken AA, Franse CCB, Tan SSSS, Verma AA, Alhambra TT, et al. The association of fear of falling and physical and mental Health-Related Quality of Life (HRQoL) among community-dwelling older persons; a cross-sectional study of Urban Health Centres Europe (UHCE). BMC Geriatr. 2023; 23 (1): 291. DOI: 10.1186/s12877-023-04004-v.
- Launders N, Hayes JF, Price G, Osborn DP. Clustering of physical health multimorbidity in people with severe mental illness: An accumulated prevalence analysis of United Kingdom primary care data. PLoS Med. 2022; 19 (4): e1003976. DOI: 10.1371/journal.pmed.1003976.
- Navarra GA, Tabacchi G, Scardina A, Agnese M, Thomas E, Bianco A, et al. Functional fitness, lifestyle and demographic factors as predictors of perceived physical and mental health in older adults: A structural equation model. PLoS One. 2023; 18 (9): e0290258. DOI: 10.1371/journal.pone.0290258.
- Stock NM, Costa B, Wilkinson-Bell K, Culshaw L, Kearney A, Edwards W. Psychological and physical health outcomes in adults with craniosynostosis. Cleft Palate Craniofac J. 2023; 60 (3): 257– 67. DOI: 10.1177/10556656211059966.
- Wang S, Zhang C, Xu W. Mindfulness, mortality, disability rates, physical and mental health among the oldest old. Health Psychol. 2023; 42 (10): 746–55. DOI: 10.1037/hea0001315.
- 9. Ковалев С. П., Воронин В. Н., Яшина Е. Р., Турзин П. С., Лукичев К. Е. Организационные, методологические и медицинские аспекты управления физическим здоровьем и спортивной подготовкой. М.: Грифон, 2024; 500 с.
- 10. Полякова О. Б., Бонкало Т. И. Физическое здоровье: дайджест [электронный ресурс]. М.: ГБУ «НИИОЗММ ДЗМ», 2023; 58 с.
- Аксенова Е. И., Камынина Н. Н., Турзин П. С. Анализ взаимосвязи физического и психического здоровья

- населения за рубежом: обзор. Современные проблемы здравоохранения и медицинской статистики. 2024; (2): 87–112. DOI: 10.24412/2312-2935-2024-2-87-112.
- Agbangla NF, Séba MP, Bunlon F, Toulotte C, Fraser SA. Effects of physical activity on physical and mental health of older adults living in care settings: A systematic review of meta-analyses. Int J Environ Res Public Health. 2023; 20 (13): 6226. DOI: 10.3390/ijerph20136226.
- Alosaimi N, Sherar LB, Griffiths P, Pearson N. Clustering of diet, physical activity and sedentary behaviour and related physical and mental health outcomes: a systematic review. BMC Public Health. 2023; 23 (1): 1572. DOI: 10.1186/s12889-023-16372-6.
- Bencsik P, Halliday TJ, Mazumder B. The intergenerational transmission of mental and physical health in the United Kingdom. J Health Econ. 2023; (92): 102805. DOI: 10.1016/j.jhealeco.2023.102805.
- Bernstein DN, Lans A, Karhade AV, Heng M, Poolman RW, Schwab JH, et al. Are detailed, patient-level social determinant of health factors associated with physical function and mental health at presentation among new patients with orthopaedic conditions? Clin Orthop Relat Res. 2023; 481 (5): 912–21. DOI: 10.1097/CORR.00000000000002446.
- Турзин П. С., Гурылина М. В., Аксенова Е. И., Ходырева Л. А., Богдан И. В., Чистякова Д. П. Создание организационных условий для формирования здорового образа жизни у населения. Проблемы социальной гигиены, здравоохранения и истории медицины. 2019; 27 (5): 704–9. DOI: 10.32687/0869-866X-2019-27-si1-704-709.
- 17. Ушаков И. Б., Турзин П. С., Попов В. И. Стресс. Пандемии. Конфликты. Долголетие. М.: Научная книга, 2023; 274 с.
- Рябова Н. В. Цифровизация отрасли физической культуры и спорта в Республике Марий Эл. Научный лидер. 2024; 7 (157). URL: https://scilead.ru/article/6009-tsifrovizatsiya-otraslifizicheskoj-kulturi-i.
- 19. Ковалев С. П., Яшина Е. Р., Ушаков И. Б., Турзин П. С., Лукичев К. Е., Генералов А. В. Корпоративные программы укрепления профессионального здоровья работников в Российской Федерации. Экология человека. 2020; (10): 31–7. DOI: 10.33396/1728-0869-2020-10-31-37.
- Яшина Е. Р., Лукичев К. Е., Генералов А. В., Турзин П. С. Особенности разработки и внедрения корпоративных программ укрепления здоровья работников в регионах страны. Теория и практика физической культуры. 2021; (12): 78–9.
- Ковалев С. П., Яшина Е. Р., Турзин П. С., Лукичев К. Е. Особенности медицинского обеспечения спортсменов —

# ОРИГИНАЛЬНОЕ ИССЛЕДОВАНИЕ

- детей и подростков за рубежом. Теория и практика физической культуры. 2024; (5): 88–90.
- 22. Breslin G, Hillyard M, Brick N, Shannon S, McKay-Redmond B, McConnell B. A systematic review of the effect of The Daily Mile™ on children's physical activity, physical health, mental health, wellbeing, academic performance and cognitive function. PLoS One. 2023; 18 (1): e0277375. DOI: 10.1371/journal. pone.0277375.
- 23. Jones EJ, Schreier HMC. Self-rated mental and physical health are prospectively associated with psychosocial and academic
- adjustment to college. J Am Coll Health. 2023; 71 (3): 715–24. DOI: 10.1080/07448481.2021.1904956.
- Yang L, Corpeleijn E, Hartman E. A prospective analysis of physical activity and mental health in children: the GECKO Drenthe cohort. Int J Behav Nutr Phys Act. 2023; 20 (1): 114. DOI: 10.1186/s12966-023-01506-1.
- Yao B, Takata SC, Mack WJ, Roll SC. Modeling extracurricular activity participation with physical and mental health in college students over time. J Am Coll Health. 2023; 71 (4): 1232–40. DOI: 10.1080/07448481.2021.1926263.