SEREDOVSKA, Viktoriya, KOROSTYLOVA, Hanna, BURDIN, Igor. Developing Healthy Lifestyle Competencies Through an Elective Course in Psychoregulatory Health-Enhancing Fitness: An Educational Model in Medical Education Pedagogy and Psychology of Sport. 2026;32:74573. elSSN 2450-6605.
https://doi.org/10.12775/PPS.2026.32.74573
https://apcz.umk.pl/PPS/article/view/74573

The journal has had 5 points in Ministry of Science and Higher Education parametric evaluation. § 8. 2) and § 12. 1. 2) 22.02.2019.

The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 08.06.2026. Revised: 15.06.2026. Accepted: 18.06.2026. Published: 30.06.2026.

Developing Healthy Lifestyle Competencies Through an Elective Course in Psychoregulatory Health-Enhancing Fitness: An Educational Model in Medical Education

Viktoriya Seredovska, Hanna Korostylova, Igor Burdin

Odesa National Medical University, Odesa, Ukraine

Viktoriya Seredovska
Sered63@ukr.net
ORCID 0009-0007-3101-1887

Hanna Korostylova
ankor-2006@ukr.net
ORCID 0009-0007-5164-7321

Igor Burdin
Igor.burdin@onmedu.edu.ua
ORCID 0009-0001-8912-4266

Abstract

Introduction. Regular physical activity is an important determinant of health and an essential component of a healthy lifestyle. Higher education institutions provide an appropriate environment for developing practical competencies that encourage lifelong participation in health-enhancing physical activity.

Aim. To describe the educational model, organization, and intended learning outcomes of an elective course in psychoregulatory health-enhancing fitness for undergraduate medical students.

Materials and Methods. A descriptive educational study based on curriculum analysis was conducted. The officially approved course syllabus was analysed with respect to educational objectives, course structure, thematic content, teaching methods, intended learning outcomes, and assessment procedures. The analysis was supplemented by the collective teaching experience of the course instructors.

Results. The elective course comprises complementary educational components, including Pilates-based exercises, fitness yoga, Body&Mind exercises, breathing exercises, myofascial release techniques, and independent physical activity planning. Rather than teaching individual exercise methods, the course integrates these components into a unified educational model aimed at developing movement competence, body awareness, self-management skills, and healthy lifestyle competencies. The student-centred organization of the course supports practical engagement in health-enhancing physical activity and encourages independent participation beyond the educational setting.

Conclusions. The proposed educational model demonstrates that an elective physical education course may serve as an effective educational environment for developing healthy lifestyle competencies through practical experience with different forms of health-enhancing physical activity. The model may be applicable to other higher education programmes seeking to strengthen health promotion within the educational process.

Abstract Abridged. This article describes the educational model of an elective course in psychoregulatory health-enhancing fitness developed for undergraduate medical students. Based on curriculum analysis, the paper presents the organization, educational components, and intended learning outcomes of the course. The programme integrates Pilates-based exercises, fitness yoga, Body&Mind activities, breathing exercises, myofascial release techniques, and independent physical activity planning within a student-centred educational framework. Rather than emphasizing mastery of individual exercise methods, the course focuses on developing healthy lifestyle competencies, movement competence, body awareness, self-management, and sustainable participation in regular health-enhancing physical activity. The proposed educational model may also be relevant for other higher education programmes promoting healthy lifestyle behaviours.

Keywords: **Medical education; Physical education; Healthy lifestyle; Physical activity; Educational model; Learning outcomes; Medical students**

Introduction

Regular physical activity is an essential component of a healthy lifestyle and contributes to the maintenance of physical health, functional capacity, and general well-being. The World Health Organization recommends regular aerobic and muscle-strengthening physical activity while limiting sedentary behaviour [1, 2]. Accordingly, promoting an active lifestyle requires not only knowledge of recommended exercise volumes but also practical skills that enable individuals to select appropriate and accessible forms of physical activity.

The university period is an important stage in the formation of long-term health behaviour. At the same time, academic workload, prolonged sitting, changes in daily routines, lack of time, insufficient motivation, and limited access to suitable facilities may hinder students' participation in regular physical activity [3–5]. Previous reviews have shown that physical activity among university students is associated with several indicators of health and quality of life, although the available studies differ considerably in their design, assessment methods, and strength of evidence [4, 6]. University-based initiatives may therefore provide students with structured opportunities to become familiar with different types of exercise and to identify activities that correspond to their interests, physical condition, and individual preferences [3].

This issue is particularly relevant to medical students. Their education should include an understanding of the role of physical activity in health promotion, together with the ability to apply this knowledge in everyday life. Educational interventions addressing physical activity counselling and exercise prescription have been shown to improve medical students' knowledge, confidence, attitudes, and, in some studies, counselling behaviour; however, the heterogeneity and methodological limitations of the available studies require cautious interpretation [6, 7]. A classic study also demonstrated an association between medical students' personal physical activity and their counselling practices, suggesting that personal experience with an active lifestyle may complement theoretical professional training [8]. Nevertheless, the purpose of physical education in a medical university is not to prepare professional athletes or fitness instructors. Its primary educational value lies in helping future physicians understand physical activity as a practical and sustainable element of a healthy lifestyle.

Recent medical education literature has increasingly addressed the inclusion of physical activity and self-care content in undergraduate curricula [9–11]. Available evidence indicates that educational programmes may be more useful when theoretical information is combined with practical participation, reflection on personal behaviour, and opportunities to

apply acquired skills independently [7, 9, 10, 12]. Practical exercise programmes implemented among medical students have also demonstrated the feasibility of integrating supervised physical activity and brief educational components into the university environment [12]. Such courses should not be regarded as treatment programmes or assumed to produce specific clinical effects without appropriate evaluation. Rather, they provide an educational setting in which students can acquire experience with different health-enhancing activities and learn the basic principles of their safe and individualized use.

Within this educational framework, elective fitness courses may offer a practical way to introduce students to different health-enhancing forms of physical activity. Courses that combine movement, breathing, body awareness, flexibility, and muscular control are particularly suitable for this purpose because they provide several accessible options for independent practice.

Psychoregulatory health-enhancing fitness includes exercise modalities that combine controlled movement, breathing, attention to body position, flexibility, muscular control, and conscious regulation of physical effort. The inclusion of several modalities within one elective course allows students to experience different forms of physical activity and select those most suitable for subsequent independent practice. This variability may be especially valuable because students differ in their previous exercise experience, interests, physical abilities, and preferred forms of activity. Thus, the course is intended not to demonstrate the superiority of any particular fitness method, but to provide medical students with practical knowledge and skills for incorporating appropriate physical activity into their personal healthy lifestyle.

The aim of this article was to describe the content, organization, and educational potential of an elective course in psychoregulatory health-enhancing fitness for medical students, with particular emphasis on developing practical skills for using physical activity as a component of a healthy lifestyle.

Materials and Methods

This descriptive educational study was based on an analysis of the elective course “Psychoregulatory Health-Enhancing Fitness”, implemented within the physical education curriculum at Odesa National Medical University, Ukraine. The course is offered to fourth-year medical students and is delivered by instructors of the Physical Education Unit, Department of Physical Rehabilitation, Sports Medicine and Physical Education.

The principal source material was the officially approved course syllabus. The analysis included the purpose and objectives of the course, its workload, thematic content,

organization of practical and independent learning, teaching methods, intended learning outcomes, and assessment procedures. The total course workload comprises 90 academic hours, including 30 hours of practical classes and 60 hours of independent student work.

For descriptive purposes, the course content was grouped into the following educational components: Pilates-based exercises, fitness yoga, Body&Mind practices, breathing exercises, myofascial release techniques, and the principles of planning individualized health-enhancing physical activity. These components were analysed in relation to their educational role in developing students' practical ability to use physical activity as part of a healthy lifestyle. The study did not evaluate the clinical effectiveness of individual exercise modalities.

The analysis also incorporated the collective teaching experience of the three instructors responsible for the course. Informal observations concerning student participation, engagement, and preferences for particular exercise modalities were used only to provide additional pedagogical context. These observations were not collected through standardized questionnaires and were therefore not subjected to statistical analysis.

No personal, medical, or identifiable student data were collected or analysed. The study did not involve an experimental intervention or modification of the approved educational process.

3. Results

3.1. General Characteristics of the Elective Course

The elective course "Psychoregulatory Health-Enhancing Fitness" is included in the physical education curriculum for fourth-year medical students at Odesa National Medical University. The course is designed to introduce students to contemporary health-enhancing forms of physical activity and to facilitate the development of practical skills that enable them to incorporate regular physical exercise into their daily lifestyle.

The total course workload comprises 90 academic hours, including 30 hours of practical training and 60 hours of independent study. Practical classes provide supervised instruction in the fundamental principles and techniques of psychoregulatory fitness, whereas independent work encourages students to consolidate acquired skills and to develop sustainable habits of regular physical activity.

The educational content is organized into complementary educational components that include Pilates, fitness yoga, Body&Mind exercises, breathing exercises, myofascial release techniques, and principles of planning individualized health-enhancing exercise programmes. Rather than being taught as isolated exercise systems, these components are integrated within

a unified educational framework that emphasizes safe practice, body awareness, movement quality, and the development of lifelong physically active behaviour.

The principal educational objective of the course is not to achieve sport-specific performance or therapeutic outcomes, but to provide future physicians with practical experience in using different forms of health-enhancing physical activity and to develop the competencies necessary for maintaining an active and healthy lifestyle.

The educational components of the course and their contribution to the intended learning outcomes are summarized in Table 1.

Table 1. Educational Components of the Elective Course and Their Contribution to the Intended Learning Outcomes

Educational component	**Main educational focus**	**Contribution to intended learning outcomes**
Pilates-based exercises	Postural control and movement awareness	Development of controlled movement skills and
Fitness yoga	Flexibility, balance, movement confidence	Acquisition of sustainable exercise skills
Body&Mind exercises	Conscious movement	Development of self-regulation and movement awareness
Breathing exercises	Breathing control	Coordination of breathing and physical activity
Myofascial release	Self-management	Safe application of recovery techniques
Independent training	Exercise planning	Formation of lifelong physically active behaviour

3.2. Educational Role of Individual Course Components

The educational content is organized into complementary educational components. Each component contributes to specific educational outcomes while supporting the overall objective of the course—to develop practical competencies that enable future physicians to incorporate regular physical activity into a healthy lifestyle. Consequently, the emphasis is

placed not on mastering individual exercise methods but on acquiring transferable movement skills, body awareness, self-management strategies, and confidence in planning and maintaining independent health-enhancing physical activity [7, 9, 10].

3.2.1. **Educational Role of Pilates-Based Exercises**

Pilates-based exercises constitute one of the principal practical components of the elective course. Within the curriculum, they are used to develop postural control, movement precision, muscular endurance, coordination, and body awareness through controlled and consciously performed movements. The exercises are introduced progressively, allowing students with different levels of physical fitness to participate safely while gradually improving movement quality and confidence.

From an educational perspective, Pilates provides students with practical experience in recognizing correct body alignment, maintaining movement control, and understanding the relationship between posture, breathing, and coordinated muscular activity. These competencies are transferable to many other forms of health-enhancing physical activity and therefore extend beyond the boundaries of a single exercise modality [13].

Thus, Pilates-based exercises contribute to the development of practical competencies required for the independent use of health-enhancing physical activity throughout adult life.

3.2.2. **Educational Role of Fitness Yoga**

Fitness yoga is incorporated into the curriculum as a practical means of improving flexibility, balance, coordination, and conscious movement control. The exercises encourage students to perform movements with appropriate technique while maintaining attention to breathing, posture, and movement quality. The progressive structure of the sessions allows students with different levels of previous experience to participate comfortably and safely.

Within the educational framework of the course, fitness yoga familiarizes students with an accessible form of physical activity that can be adapted to individual functional abilities and personal preferences. The emphasis is placed on developing movement confidence and encouraging regular participation rather than achieving advanced technical performance [14].

Thus, fitness yoga contributes to the acquisition of practical skills that facilitate lifelong participation in regular health-enhancing physical activity.

3.2.3. **Educational Role of Body&Mind Exercises**

Body&Mind exercises are included to strengthen students' awareness of body position, movement quality, coordination, and conscious participation in physical activity. By combining controlled movements with focused attention, these exercises encourage students

to better understand the interaction between posture, movement efficiency, and individual physical capabilities.

Educationally, this component promotes self-awareness during exercise and supports the development of movement patterns that can be safely applied during independent physical activity. Rather than emphasizing performance, the exercises encourage students to establish sustainable habits of regular movement as part of everyday life.

Thus, Body&Mind exercises contribute to the development of educational outcomes related to movement awareness, self-regulation, and sustained participation in health-enhancing physical activity.

3.2.4. **Educational Role of Breathing Exercises**

Breathing exercises are integrated throughout the course to develop conscious breathing skills during physical activity. Students learn to coordinate breathing with movement, regulate breathing patterns during exercise of different intensity, and apply controlled breathing during warm-up, exercise performance, and recovery.

Within the educational programme, breathing exercises are regarded as an important element of movement quality and exercise self-management rather than as an isolated technique. Their inclusion helps students understand the practical role of breathing control in supporting comfortable, safe, and sustainable participation in physical activity [15].

Thus, breathing exercises contribute to students' ability to regulate physical effort and to apply conscious movement strategies during independent health-enhancing exercise.

3.2.5. **Educational Role of Myofascial Release Techniques**

Basic myofascial release techniques are introduced as complementary educational tools that familiarize students with simple methods of self-management during regular physical activity. The course focuses on the safe use of these techniques as part of warm-up, recovery, and general exercise practice rather than as therapeutic procedures.

Students are introduced to fundamental principles of performing self-myofascial release, selecting appropriate muscle groups, and incorporating these techniques into personal exercise routines. This approach encourages responsible and informed participation in independent physical activity while emphasizing safety and individual adaptation.

Thus, myofascial release techniques contribute to the development of practical self-management competencies that support regular participation in health-enhancing physical activity.

3.2.6. Student-Centred Educational Perspective

Although each educational component addresses specific aspects of movement practice, they are not taught as isolated exercise systems. Instead, all modules are integrated within a unified educational framework that enables students to experience different forms of health-enhancing physical activity, compare their characteristics, and identify those most appropriate for their individual needs and preferences. Such integration supports the formation of practical educational outcomes, including movement competence, body awareness, self-management skills, and the confidence required for lifelong engagement in regular physical activity [3, 16, 17].

4. Conclusion

The present study describes an educational model of an elective course in psychoregulatory health-enhancing fitness designed for undergraduate medical students. The proposed model integrates complementary educational components into a coherent learning environment that emphasizes practical engagement with health-enhancing physical activity rather than mastery of individual exercise systems.

From an educational perspective, the course promotes the development of intended learning outcomes related to movement competence, body awareness, self-management, and independent participation in regular physical activity. The combination of Pilates-based exercises, fitness yoga, Body&Mind activities, breathing exercises, myofascial release techniques, and independent learning creates opportunities for students to explore different forms of physical activity and to identify those most appropriate for their individual needs and preferences.

The educational value of the proposed model lies in its student-centred approach and its focus on developing healthy lifestyle competencies through practical experience. By encouraging informed and sustainable participation in physical activity, the course contributes to the formation of lifelong health-enhancing behaviours that extend beyond university education.

Further educational research may evaluate the effectiveness of this model using student-reported learning outcomes and objective educational indicators.

Authors contribution:

Conceptualisation and Methodology: Viktoriya Seredovska

Formal analysis: Hanna Korostyleva

Writing-Review and Editing: Igor Burdin

All authors have read and agreed with the published version of the manuscript.

Conflicts of Interest: The authors declare no conflicts of interest.

Funding Statement: No external funding was received toper form this review.

Statement of Informed Consent: Not applicable.

References

1. World Health Organization. WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020.

2. Bull FC, Al-Ansari SS, Biddle S, Borodulin K, Buman MP, Cardon G, et al. World Health Organization 2020 guidelines on physical activity and sedentary behaviour. Br J Sports Med. 2020;54(24):1451-1462. doi:10.1136/bjsports-2020-102955.

3. Johannes C, Roman NV, Onagbiye SO, Titus S, Leach LL. Strategies and best practices that enhance the physical activity levels of undergraduate university students: a systematic review. Int J Environ Res Public Health. 2024;21(2):173. doi:10.3390/ijerph21020173.

4. Babaeer L, Stylianou M, Leveritt M, Gomersall S. Physical activity, sedentary behavior and educational outcomes in university students: a systematic review. J Am Coll Health. 2022;70(7):2184-2209. doi:10.1080/07448481.2020.1846047.

5. Ferreira Silva RM, Mendonça CR, Azevedo VD, Memon AR, Noll PRES, Noll M. Barriers to high school and university students' physical activity: a systematic review. PLoS One. 2022;17(4):e0265913. doi:10.1371/journal.pone.0265913.

6. Abrantes LCS, Morais NS, Gonçalves VSS, Ribeiro SAV, Sediyama CMNO, Franceschini SCC, et al. Physical activity and quality of life among college students without comorbidities for cardiometabolic diseases: systematic review and meta-analysis. Qual Life Res. 2022;31(7):1933-1962. doi:10.1007/s11136-021-03035-5.

7. Lehman E, Healy GN, Forbes R, Phillips M, Gilbert C, Gomersall SR. The impact of physical activity behavior change training for preprofessional health students—a systematic review. J Phys Act Health. 2025;22(5):531-545. doi:10.1123/jpah.2024-0399.

8. Frank E, Tong E, Lobelo F, Carrera J, Duperly J. Physical activity levels and counseling practices of U.S. medical students. Med Sci Sports Exerc. 2008;40(3):413-421. doi:10.1249/MSS.0b013e31815ff399.

9. Patel R, Lane S, Dinas PC, Lahart IM, Metsios GS. Physical activity implementation in the curricula of healthcare professions: a systematic review. F1000Res. 2024;13:742. doi:10.12688/f1000research.151349.1.

10. Shivgulam ME, Petterson JL, Pellerine L, Kivell MJ, Wilson T, Theou O, et al. Effectiveness of physical activity counselling and exercise prescription education among medical students: a systematic review. Can Med Educ J. 2024;15(5):95-112. doi:10.36834/cmej.77065.

11. Wan DWJ, Goh LSH, Teo MYK, Loh CJL, Yak GHK, Lee JJH, et al. Enhancing self-care education amongst medical students: a systematic scoping review. BMC Med Educ. 2024;24(1):37. doi:10.1186/s12909-023-04965-z.

12. Worobetz A, Retief PJ, Loughran S, Walsh J, Casey M, Hayes P, et al. A feasibility study of an exercise intervention to educate and promote health and well-being among medical students: the 'MED-WELL' programme. BMC Med Educ. 2020;20:183. doi:10.1186/s12909-020-02097-2.

13. Silva LL, Silva KBM, Sousa L, Rocha CP. Is the Pilates method efficient to cause changes in the body composition of healthy individuals? A systematic review. J Bodyw Mov Ther. 2022;32:51-59. doi:10.1016/j.jbmt.2022.04.005.

14. Maity S, Abbaspour R, Bandelow S, Pahwa S, Alahdadi T, Shah S, et al. The psychosomatic impact of yoga in medical education: a systematic review and meta-analysis. Med Educ Online. 2024;29(1):2364486. doi:10.1080/10872981.2024.2364486.

15. Zaccaro A, Piarulli A, Laurino M, Garbella E, Menicucci D, Neri B, et al. How breath-control can change your life: a systematic review on psycho-physiological correlates of slow breathing. Front Hum Neurosci. 2018;12:353. doi:10.3389/fnhum.2018.00353.

16. Peng S, Yuan F, Othman AT, Zhou X, Shen G, Liang J. The effectiveness of e-health interventions promoting physical activity and reducing sedentary behavior in college students: a systematic review and meta-analysis of randomized controlled trials. Int J Environ Res Public Health. 2023;20(1):318. doi:10.3390/ijerph20010318.

17. Van Luchene P, Delens C. The influence of social support specific to physical activity on physical activity among college and university students: a systematic review. J Phys Act Health. 2021;18(6):737-747. doi:10.1123/jpah.2020-0713.