



# Personal development potential of students with flat-valgus foot deformity in the process of adaptive physical education

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## Abstract

**Objective of the study** is to identify the attitude of students with flat-valgus foot deformity towards adaptive physical education classes.

**Methods and structure of the study.** 15 students aged 18 to 25 with a diagnosis of flat-valgus foot deformity, who belong to a special medical group, participated in the scientific study. The study was conducted using an anonymous questionnaire consisting of 20 questions divided into four sections: physical abilities, psychological qualities, social skills, and emotional state.

**Results and conclusions.** The survey revealed that regular physical exercise included in the adaptive physical education programme contributes to improving overall physical fitness; increased self-esteem and self-confidence may be associated with successful achievements and progress in physical exercise, which contributes to a sense of personal success; improved interaction with other students, increased comfort in the social environment, as well as increased social activity and integration into student life, which may be due to the fact that students from special groups begin to feel more confident.

**Keywords:** *individual potential, adaptive physical culture, students, flat-valgus deformity.*

**Introduction.** In today's world, physical health and activity play an important role in the quality of life of every person, especially those with special needs (or people with disabilities). Students with flat-valgus foot deformity are one such group that requires a specialised approach to physical activity. Regular specialised exercise classes contribute to significant improvements in physical parameters, as well as positive changes in psychological state: increased self-esteem, self-confidence and motivation. Classes also contribute to the development of social skills, improving interactions with others and reducing stress [1, 3].

A 2018 study conducted by Lyudmila and Soslan Adyrkhaev showed the positive impact of adaptive physical education on students with special needs. Many years of experimental research by the authors of the methodology demonstrated improvements in the physical health and fitness of students, as well as their successful integration into the student environment. The results prove that in the presence of various dis-

eases, disorders and/or lack of motivation for physical activity, a personalised approach to people with disabilities is required, with individual conditions selected for their physical development. The results also testify to the students' life in a student community where they feel comfortable and confident [2, 4].

According to experts, the goals of adaptive physical education may be to help people with special needs, including students diagnosed with flat-valgus foot deformity, by promoting their comprehensive development and social integration.

**Objective of the study** is to identify the attitude of students with flat-valgus foot deformity towards adaptive physical education classes.

**Methods and structure of the study.** 15 students aged 18 to 25 with a diagnosis of flat-valgus foot deformity, who belong to a special medical group, took part in the scientific work. Adaptive physical education classes included a variety of techniques and methods aimed at preventing and improving the condition of the feet:



1. strengthening exercises: toe raises, walking on heels – improves muscle tone and stabilises the feet;
2. achilles tendon stretching and mobilisation techniques to increase flexibility;
3. massage and self-massage: foot massage and use of massage balls to relax muscles and improve blood circulation;
4. special footwear and/or orthopaedic insoles: use of special footwear and/or insoles to distribute weight evenly across the feet.

The study was conducted using an anonymous questionnaire consisting of 20 questions divided into four sections: physical abilities, psychological qualities, social skills, and emotional state. This questionnaire will help to study how adaptive physical education classes affect various aspects of the personal development of students with flat-valgus foot deformity.

Results of the study and discussion. The survey data revealed a positive impact of adaptive physical education on physical abilities. The first section addressed the following questions: 1. 'How would you rate your strength after starting APE classes?' The results are presented in Figure 1.

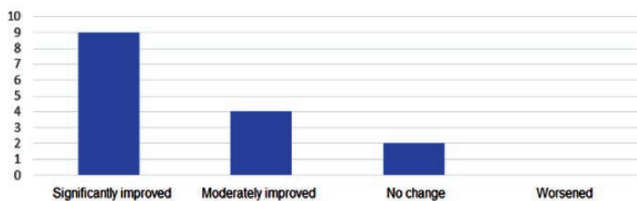


Figure 1. Results of question No. 1

Next was the question, 'Have you noticed an improvement in flexibility since starting the classes?' 40% of participants chose 'significant,' 33% chose 'moderate,' and 27% chose 'no change.' When asked, 'Has your endurance increased since starting the classes?', the results were as follows: 40% of participants reported a significant increase, 33% reported a slight increase, 20% reported no change, and 7% reported a decrease. The next question was, 'How often do you experience pain in your feet after class?' 20%

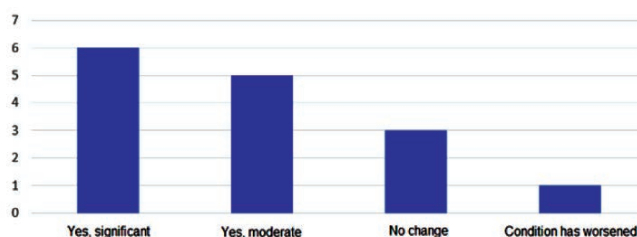


Figure 2. Results of question No. 5

of participants never experienced pain, 40% rarely, 27% often, and 13% constantly. The final question was 'Do students feel a general improvement in their physical condition after regular classes?' The results are shown in Figure 2.

The second part of the questions assessed the impact of adaptive physical education on students' psychological qualities. Question No. 6 – 'How did APE classes affect your self-esteem?': 3 participants reported a significant increase, 4 reported a moderate increase, 7 reported no change, and 1 reported a decrease. The next question was 'Do you feel more confident thanks to the classes?': yes, significantly – 5 participants answered yes, yes, slightly – 6 participants, no change – 4 participants, no one's confidence decreased. Question 8: 'How did the classes affect your motivation to study and other activities?' The results are presented in Figure 3.

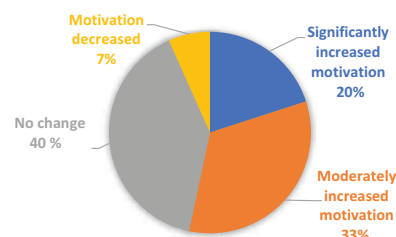


Figure 3. Results of question No. 8

Next was the question, 'Have you noticed a reduction in stress levels thanks to the classes?' The results are also shown in Figure 4.

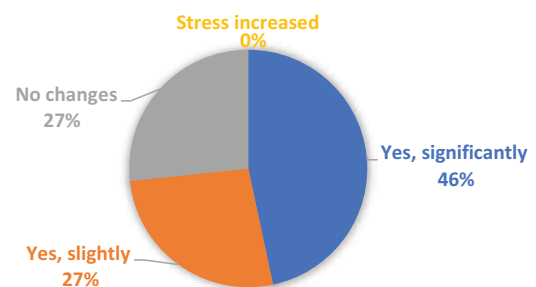


Figure 4. Results of question No. 9

The final question of the second block summarised the results: 'Do you feel more positive and emotionally stable thanks to the classes?' 6 participants felt significantly more positive, 5 felt slightly more positive, 4 felt no change, and none felt worse.

The next group of questions was aimed at determining the impact of the classes on the participants'



social skills. The question about interaction with other students yielded the following results: significantly improved – 5 participants, slightly improved – 6, no change – 4, worsened – 0. The question ‘Do you feel more comfortable in a social environment thanks to the classes?’ yielded the following results: significantly more comfortable – 6 participants, slightly more comfortable – 4 participants, no change – 5 participants, less comfortable – 0. The question ‘How did the classes affect your ability to build friendships?’ the results were as follows: significantly improved – 3 participants, slightly improved – 5, no change – 7, worsened – 0. The results of question 14, ‘Have you noticed an increase in social activity thanks to the classes?’, are shown in Figure 5.

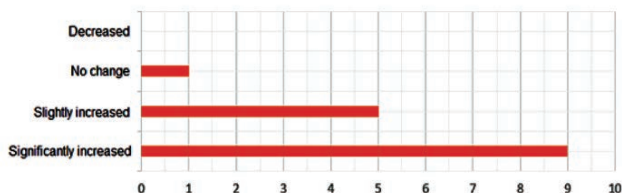


Figure 5. Results of question No. 14

The final question in the third block, ‘Do you feel more integrated into the student environment thanks to the classes?’ yielded the following results: yes, significantly – 4 participants, slightly – 6 participants, no change – 5 participants, integration decreased – 0.

The results for question 16, ‘How did the APE classes affect your emotional state?’, are presented in Fig. 6.

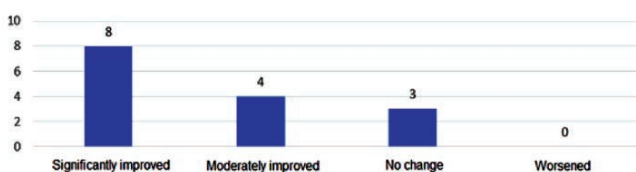


Figure 6. Results of question No. 16

When asked, ‘Do you feel less anxious thanks to regular exercise?’, the results were as follows: yes, significantly – 20% of respondents, slightly – 47%, no change – 33%, anxiety increased – 0%.

**Conclusions.** The student survey revealed the following:

- the overall improvement in physical condition among most participants can be explained by the comprehensive approach of adaptive physical education to their specific needs;
- the increase in self-esteem and confidence is associated with successful achievements and progress in physical exercises, which contributes to a sense of personal success;
- improved interaction with other students, increased comfort in the social environment, as well as increased social activity and integration into student life;
- increased relaxation is associated with performing exercises that help relieve physical and mental tension.

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