The **theme** of the reseasearch is a physical rehabilitation of the children with feet deformity using exercises with a ball.

The **topicality** of the research is stipulated by the rapid quantity growth of the people diagnosed with feet deformity. This fact is proved by the statistical data. More than 2 thousand feet and musculoskeletal system deformity diagnosis are registered every year in Ukraine. Students of age 7-16 are mostly prone to the spine deformation and spring-like function disorder. The musculoskeletal system diseases have considerably rejuvenated over the years. An unfortunate statistic has been released, which shows that almost every 6th-7th child at the age of 7 or 8 is diagnosed with flatfoot.

The **object** of the research is the rehabilitation of patients with flatfoot.

The **subject** matter of the research is the influence of physical exercises with a ball on the rehabilitation process of patients diagnosed with flatfoot.

The **goal** of the research is to scientifically actualize an innovative technique of physical rehabilitation with a ball and apply it into the actual process of rehabilitation.

To achieve the goal set we have to solve the following **tasks**:

1. To analyze in the literature the research state of the issue with introduction of the physical exercises with a ball to a restorative treatment of patients diagnosed with flatfoot.
2. To investigate static and dynamic feet function in a control and an experimental group of children with flatfoot.
3. To develop and apply innovational methods of physical rehabilitation with a ball into a rehabilitation process of patients.

To solve these concrete tasks the following **methods** of the scientific investigation will be applied:

1. The method of literary analysis;
2. The method of monitoring;

3. The following biomedical methods: plantography, somatometry, photo and video shooting, experiments following the schemes of the physical exercises complex, pedagogical experiment, method of mathematical statistics.

The **scientific significance** of the research is determined by the fact that the above mentioned innovative rehabilitation exercises with a ball show a positive influence on a dynamic foot function. The application of this method may increase the effectivity of the HF (healing fitness) and the feet adjustment of children at the age of 7-8. Here we took into account the results of the experimental group. We took two numbers: the original raw numbers and the average number after applying an experiment. The method of comparative analysis proved that as a result the numbers of spring-like function effectivity significantly improved. Moreover, the scientific approaches to the organization process of the physical rehabilitation of patients diagnosed with flatfoot have been extended. Finally, the data about clinical and physiological mechanisms of the application of the exercises with flatfoot diagnosis was complemented.

The **practical application** is based on the possible universal usage of the obtained theoretical data and methodological guidance in the process of the rehabilitation process for the children with feet defects.
The **practical value** of the applied data consists in the development of the nosologically oriented method of conducting a musculoskeletal system flaw rehabilitation. This made it possible to suggest an original methodology of the HF (healing fitness) with a ball for trainings and organize practical recommendations for the methodists.