

Abstract

Title: The effect of sensomotoric stimulation on flat foot of children

Introduction: Flat foot is a common health problem in childhood. Its development is related to congenital or acquired dysfunction of the plantar vault. There is no single opinion on the criteria for diagnosis and therapy forms. The aftereffects and health risks of flat foot are often neglected. The therapy form of sensomotoric stimulation, including balance exercises and walking barefoot over different surfaces, could be an appropriate part of the physical activities and games for children in kindergarten.

Objectives: The main objective of this work is to evaluate the effect of sensomotoric stimulation of flat foot at preschool age.

Methods: The research contains 21 children. Forty-two foot prints were taken at the beginning of the therapy. Three methods were used to evaluate the foot prints: the Chippaux-Šmiřák method, the Godunov-Sztriter method and the Mayer method. The therapy form of sensomotoric stimulation included balance exercises and walking barefoot over different surfaces. The duration of therapy was 15 minutes each school day for six months. The control foot prints of 15 children were taken after the therapy and the results were compared with the foot prints before therapy.

Results: The research contains twenty-one children at the beginning of the therapy, forty-two foot prints were taken. Thirty control foot prints were taken at the end of therapy. It was found that four of five children with the first grade of flat feet diagnosed by Chippaux-Šmiřák method, improved to normal arched foot of the second grade. The last flat foot of the first grade changed to the second grade flat foot. Only twenty-two control foot prints from twenty-seven second grade flat feet diagnosed by Sztriter-Godunov method, were taken. Seven of them were changed to normal, eleven remained unchanged, four improved to the first grade of flat foot. Only three control foot prints from four of the first grade of flat feet diagnosed by Sztriter – Godunov method, were

taken. All of them have changed to normal.

The majority of flat feet have improved. But there are no statistically significant conclusions because of the small number of participants and because of the absence of control group.

Keywords: *flat foot, plantar vault, foot print, physiotherapy, Chippaux-Šmiřák method, Sztriter – Godunov method, Mayer method*

