

Abstract

The diploma thesis investigates the effect of specifically designed six-week clinical Pilates program on posture and low back pain. The theoretical part contains an overview of the Pilates method – the history, principles and its usage in rehabilitation. It also briefly describes the concept of Dynamic Neuromuscular Stabilization (DNS), which, along with the original Pilates method and the Spiraldynamic concept, has created the current Pilates Clinic Method. Furthermore, one chapter is devoted to the system of training Pilates teachers in the Czech Republic.

The main objective of the practical part is to evaluate and compare the effect of an organized and an individual six-week Pilates exercise programme in patients with faulty posture and low back pain. Subsequently, constitutive objectives are set on the basis of selected examination methods. Firstly, evaluation of the exercise programme by the means of clinical objective tests combined into 5 groups: standing and balance, spinal mobility, DNS tests, somatognosia (shoulder width) and respiratory amplitude. Secondly, with the instrumental measurement of Bodystat's values: height, weight, waist circumference, hip circumference, fat, active body mass, water and body mass index. Thirdly, subjective evaluation using standardized questionnaires the Numerical Rating Scale for Pain and the Oswestry Disability Index, and for the purposes of this diploma thesis created, a non-standardized Questionnaire for Evaluation of Lessons by the Client.

Measurements were taken both before and after the programme. A significant change, specifically an improvement ($p < 0.05$) was found in some of the objective test parameters: standing and balance, DNS tests and respiratory amplitude. Within the instrumentation, there was a significant change only in the waist circumference value of the individual group. As far as a subjective evaluation is concerned, there was a significant change for both groups in the Numerical Rating Scale for Pain and for the organized group in the Oswestry Disability Index. The evaluation of the non-standardized questionnaire was almost identical for both groups and resulted in a positive conclusion within the organization of the exercise programme, subjective assessment and satisfaction of the probands.

Thus, the Pilates programme, if executed with guidance of an experienced lecturer or physiotherapist, can be an appropriate choice of physical activity for patients with faulty posture and low back pain. This conclusion is confirmed by the majority of current scientific studies.