Motivative exercise using PataKoro

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Introduction: Stroke is a leading cause of disability and causes severe neurological dysfunction. The consequences of stroke impact the quality of life of the patient through the different degrees of disabilitation, social, and economic conditions that make it difficult to live independently. Therefore, we consider that there is a need for a simple and effective device to aid the patients in the rehabilitation process.

Material and Methods: The study took place in the medical-social center Bacesti (Ro/Eu), and it included 21 patients (11 women and 10 men) all with a history of stroke aged 59 to 96 years. We used the PataKoro (Japanese device for rehabilitation) devices to perform the exercise that has bilateral movement of the legs so that the affected leg becomes active by the unaffected leg. We measured the knee flexion/extension, thigh perimeter, and ankle flexion, extension.

Results: At the end of the first two weeks of treatment the knee flexion improved with approximately 21 degrees, the extension had a 7 degrees improvement in one patient, thigh perimeter had, and an average of 1.7 cm increase, ankle flexion had an average of 2.8 degrees increase, the extension did not change. Using these types of devices is simple, low-cost, and easy to use in stroke rehabilitation, has a good psychological impact and is increasing the patients quality of life.

Conclusions: These results are showing that the motivative exercise using PataKoro in the dorsiflexion and plantar flexion exercise of the ankle joint have an effect on the range of motion of the knee/ankle and the thigh perimeter. One of the goals in rehabilitation is to achieve mobility, improving physical and psychological status. These devices enhance functional independence in the hospital and at home.