Abstract

Background: Infants with Down syndrome present with organic and neurological changes that may lead to a delay in the acquisition of motor skills such as kicking, a fundamental skill that is a precursor of gait and is influenced by intrinsic and extrinsic factors. Therefore, this movement should be taken into account in early physical therapy interventions in infants. Objective: To analyze and to compare the effect of additional weight on the frequency of kicks in infants with Down syndrome and infants with typical development at 3 and 4 months of age. Method: Five infants with Down syndrome and five with typical development at 3 and 4 months of age were filmed. The experiment was divided into four experimental conditions lasting 1 minute each: training, baseline, weight (addition of ankle weight with 1/3 the weight of the lower limb), and post-weight. Results: There were significant differences between groups for all variables (p<0.05), with lower frequencies observed for infants with Down syndrome in all variables. There were significant differences between the experimental conditions baseline and post-weight (p<0.001) for both groups in the frequency of contact and success, with a higher frequency in the post-weight condition. Conclusions: The weight acted as an important stimulus for both groups, directing the kicks toward the target and improving the infants’ performance in the task through repetition, however, the infants with Down syndrome had lower frequencies of kicks.

Keywords

Keywords, early intervention, child development, rehabilitation.