

Effect of Eight Weeks of Combined Turning Exercises on the Motor Skills in Female Students with Down Syndrome: Quasi-Experimental Study

Negar Heidari¹, Gholamali Ghasemi², Morteza Sadeghi³

Original Article

Abstract

Introduction: Down syndrome is one of the most common genetic diseases in people with intellectual disabilities, which leads to delays in motor skill. Therefore, this study was performed to determine the effect of eight weeks of turning exercises on the motor skills in female students with Down syndrome.

Materials and Methods: In this semi-experimental research, 26 female students with Down syndrome were selected in an accessible and purposeful manner and then divided into experimental group (with an average age of 12.15 ± 1.62 , height 139.23 ± 8.94 , weight 42.62 ± 13.44 and IQ 63.02 ± 5.54) and control group (with mean age 12.23 ± 1.53 , height 141.15 ± 10.31 , weight 45.46 ± 15.94 and IQ 63.05 ± 5.49) were randomly paired. Before and after the training period, gross and fine motor skills was evaluated using Short form of Bruininks-Oseretsky test. The subjects of the experimental group underwent 24 sessions (each session lasting 45-60 minutes). Analysis of variance for duplicate data was used to analyze the data at a significance level of 0.05.

Results: The findings revealed a significant interaction in gross motor skills ($P < 0.001$, $F = 113.60$), fine motor skills ($P = 0.040$, $F = 4.40$) and composite score ($P < 0.001$, $F = 68.55$) in the experimental group compared to the control group. These results indicate that the implementation of combined turning exercises had a significant impact on enhancing the motor skills of students with Down syndrome.

Conclusion: According to the results of this study, these exercises can be used as an effective method to improve the gross motor skills of students with Down syndrome.

Keywords: Down syndrome; Turning exercises; Motor Skills; Rehabilitation

Citation: Heidari N, Ghasemi G, Sadeghi M. Effect of Eight Weeks of Combined Turning Exercises on the Motor Skills in Female Students with Down Syndrome: Quasi-Experimental Study. J Res Rehabil Sci 2022; 18: 113-20.

Received date: 26.05.2021

Accept date: 01.09.2021

Published: 07.10.2022

1- MSc Student, Department of Sport Injuries and Corrective Exercise, School of Sport Sciences, University of Isfahan, Isfahan, Iran

2- Professor, Department of Sport Injuries and Corrective Exercise, School of Sport Sciences, University of Isfahan, Isfahan, Iran

3- Assistant Professor, Department of Sport Injuries and Corrective Exercise, School of Sport Sciences, University of Isfahan, Isfahan, Iran

Corresponding Author: Gholamali Ghasemi; Professor, Department of Sport Injuries and Corrective Exercise, School of Sport Sciences, University of Isfahan, Isfahan, Iran; Email: gh.ghasemi@spr.ui.ac.ir