

ABSTRAK

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Pengaruh *Heel Raises Exercise* Dan *Towel Curl Exercise* Terhadap Keseimbangan Statis Pada Anak Berkebutuhan Khusus Dengan *Flat Foot*

Pendahuluan: Gangguan keseimbangan statis pada anak berkebutuhan khusus salah satunya disebabkan oleh adanya masalah pada sistem *muskuloskeletal* seperti telapak kaki datar (*flat foot*) yang dapat menyebabkan anak rentan mengalami kesulitan berjalan dan mudah terjatuh. Penanganan fisioterapi dapat membantu meningkatkan keseimbangan statis anak dengan pemberian intervensi latihan penguatan otot seperti *heel raises exercise* dan *towel curl exercise*. *Heel raises exercise* dapat menimbulkan efek pada saraf dan skeletal karena adanya rangsangan *proprioseptif* sehingga posisi tubuh dapat tetap seimbang dan *towel curl exercise* dapat menstimulasi otot secara penuh terutama pergerakan aktivitas otot inti sehingga berdampak pada perbaikan keseimbangan statis anak.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh *heel raises exercise* dan *towel curl exercise* terhadap keseimbangan statis pada anak berkebutuhan khusus dengan *flat foot*.

Metode Penelitian: Penelitian ini menggunakan desain penelitian *quasi experiment study*, dengan *one group pre test and post test design*. Teknik pengambilan sampel menggunakan *total sampling* dengan 33 responden. Instrumen penelitian menggunakan *one legged stance test* dengan nilai validitas 0,931 dan nilai reliabilitas 0.879. *Heel raises exercise* dan *towel curl exercise* diberikan sebanyak 3 kali per minggu selama 2 minggu. Uji normalitas data menggunakan uji *shapiro wilk* dan uji pengaruhnya menggunakan uji *wilcoxon sign ranks test*.

Hasil Penelitian: Keseimbangan statis sebelum intervensi diperoleh mean kaki kanan 07,59 detik dan pada kaki kiri dengan mean 05,64 detik, sedangkan sesudah intervensi diperoleh mean kaki kanan 13,58 detik dan pada kaki kiri dengan mean 10,82 detik. Hasil uji statistik didapatkan nilai *p value* sebesar 0,000 ($p < 0,05$) yang artinya ada pengaruh *heel raises exercise* dan *towel curl exercise* terhadap keseimbangan statis pada anak berkebutuhan khusus dengan *flat foot*.

Simpulan: *Heel raises exercise* dan *towel curl exercise* berpengaruh dalam meningkatkan keseimbangan statis pada anak berkebutuhan khusus dengan *flat foot*.

Saran: Diharapkan penelitian ini dapat digunakan sebagai referensi dan salah satu latihan untuk meningkatkan keseimbangan statis pada anak berkebutuhan khusus dengan *flat foot*.

Kata kunci : Keseimbangan statis, *Flat foot*, *Heel raises exercise*, *Towel curl exercise*

Daftar pustaka : 50 (2016-2023)

ABSTRACT

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The Effect of Heel Raises Exercise and Towel Curl Exercise on Static Balance in Children with Special Needs and Flat Feet

Introduction: Static balance disorders in children with special needs are often caused by musculoskeletal issues such as flat feet, which can lead to difficulties in walking and a higher risk of falling. Physiotherapy interventions, such as muscle strengthening exercises like heel raises and towel curl exercises, can help improve static balance in these children. Heel raises exercises can affect nerves and the skeletal system due to proprioceptive stimulation, which helps maintain body balance. Meanwhile, towel curl exercises can fully stimulate the muscles, especially the core muscle activities, thus improving the children's static balance.

Objective: This study aimed to determine the effect of heel raises exercise and towel curl exercise on static balance in children with special needs and flat feet.

Research Methods: This study employed a quasi-experimental design with a one-group pretest and posttest design. The sampling technique used was total sampling with 33 respondents. The research instrument was a one-legged stance test, with a validity score of 0,931 and a reliability score of 0,879. Heel raises and towel curl exercises were administered three times a week for two weeks. Data normality was tested with the Shapiro-Wilk test, and the effect was tested with the Wilcoxon signed-ranks test.

Result: The mean static balance before the intervention for the right foot was 07.59 seconds, and for the left foot, it was 05.64 seconds. After the intervention, the mean static balance for the right foot was 13.58 seconds, and for the left foot was 10.82 seconds. The statistical tests showed a p-value of 0.000 ($p < 0.05$), indicating that heel raises and towel curl exercises significantly affect static balance in children with special needs and flat feet.

Conclusion: Heel raises exercise and towel curl exercise significantly improve static balance in children with special needs and flat feet.

Recommendation: It is expected that this study can serve as a reference and one of the exercises to enhance static balance in children with special needs and flat feet.

Keywords: Static balance, Flat foot, Heel raises exercise, Towel curl exercise

References: 50 (2016-2023)