

ABSTRAK

HUBUNGAN TINGGI MEDIAL LONGITUDINAL ARKUS TERHADAP KESEIMBANGAN STATIS PADA ANAK USIA 9-12 TAHUN DI SDN 2 KAMPUNG BARU

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Latar Belakang: Keseimbangan tubuh merupakan kemampuan penting dalam aktivitas sehari-hari yang dipengaruhi oleh berbagai faktor, salah satunya struktur anatomi kaki, khususnya medial longitudinal arkus (MLA). Perbedaan tinggi MLA dapat memengaruhi distribusi beban tubuh dan kestabilan postural. Penelitian ini bertujuan untuk mengetahui hubungan antara tinggi medial longitudinal arkus dengan keseimbangan statis pada anak usia 9–12 tahun di SDN 2 Kampung Baru.

Metode: Penelitian ini merupakan studi analitik observasional dengan pendekatan *cross-sectional*. Sampel penelitian berjumlah 84 siswa yang dipilih melalui teknik *total sampling* sesuai kriteria inklusi dan eksklusi. Pengukuran tinggi MLA dilakukan menggunakan metode *chippaux-smirak index* (CSI) melalui analisis jejak kaki, sedangkan keseimbangan statis diukur menggunakan *Stork Stand Test*. Analisis data menggunakan uji *Chi-square* dengan tingkat signifikansi 0,05.

Hasil: Penelitian menunjukkan bahwa 67% siswa memiliki arkus kaki normal, 27% *pes planus*, dan 6% *pes cavus*. Keseimbangan statis berada pada kategori baik sebesar 80%, rata-rata 16,6%, dan buruk 2,4%. Uji *Chi-square* menunjukkan nilai $p < 0,001$ yang menandakan adanya hubungan bermakna antara tinggi medial longitudinal arkus dengan keseimbangan statis. Anak dengan arkus rendah (*pes planus*) cenderung memiliki keseimbangan lebih buruk dibandingkan anak dengan arkus normal.

Simpulan: Terdapat hubungan yang signifikan antara tinggi medial longitudinal arkus dan keseimbangan statis pada anak usia 9–12 tahun di SDN 2 Kampung Baru.

Kata Kunci: Medial longitudinal arkus, keseimbangan statis, anak usia sekolah dasar, *Chippaux-smirak index*, *Stork Stand Balance Test*

ABSTRACT

THE RELATIONSHIP BETWEEN MEDIAL LONGITUDINAL ARCH HEIGHT AND STATIC BALANCE IN CHILDREN AGED 9-12 YEARS AT SDN 2 KAMPUNG BARU

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Body balance is an essential ability in daily activities and is influenced by several factors, one of which is the anatomical structure of the foot, particularly the medial longitudinal arch (MLA). Variations in MLA height can affect body weight distribution and postural stability. This study aimed to determine the relationship between medial longitudinal arch height and static balance among children aged 9–12 years at SDN 2 Kampung Baru. This research was an observational analytic study with a cross-sectional approach. The sample consisted of 84 students selected using a total sampling technique based on inclusion and exclusion criteria. The MLA height was measured using the Chippaux-Smirak Index (CSI) obtained from footprint analysis, while static balance was assessed using the Stork Stand Test. Data were analyzed using the Chi-square test with a significance level of 0.05. The results showed that 67% of students had normal arches, 27% had flat feet (pes planus), and 6% had high arches (pes cavus). Static balance performance was categorized as good in 80% of participants, average in 16.6%, and poor in 2.4%. The Chi-square test revealed a $p\text{-value} < 0.001$, indicating a significant relationship between medial longitudinal arch height and static balance. Children with lower arches (pes planus) tended to have poorer static balance compared to those with normal arches. It can be concluded there is a significant relationship between medial longitudinal arch height and static balance among children aged 9–12 years at SDN 2 Kampung Baru.

Key words: Medial longitudinal Arch, Static Balance, School-age children, Chippaux-smirax index, Stork Stand Balance Test.