# ABSTRAK

**Hubungan *Hamstring Tightness* dengan Proprioseptif Sendi Lutut pada Mahasiswa Laki – Laki di Fakultas Vokasi Universitas Airlangga**

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**Latar Belakang:** *Hamstring tightness* atau pemendekan otot *hamstring* adalah ketidakmampuan individu untuk mencapai ≤20$^{o}$ *extensi knee* dengan posisi 90$^{o}$ *flexi hip* yang disertai dengan rasa tidak nyaman atau nyeri di sepanjang bagian belakang paha. Proprioseptif adalah kemampuan individu untuk mengintegrasikan sinyal sensorik dari mekanoreseptor untuk menentukan posisi tubuh dan gerak tubuh dalam ruang. Gaya hidup sedenter mahasiswa yang meliputi duduk dalam waktu lama adalah salah satu sebab terjadinya *hamstring tightness* dan gangguan proprioseptif sendi lutut. Penelitian ini bertujuan untuk menganalisis hubungan antara *hamstring tightness* dan proprioseptif sendi lutut pada mahasiswa laki – laki di Fakultas Vokasi Universitas Airlangga Surabaya.

**Metode Penelitian:** Studi *cross-sectional* dilakukan pada 47 mahasiswa laki – laki di Fakultas Vokasi Universitas Airlangga Surabaya. *Active knee extension test* digunakan untuk mengetahui fleksibilitas otot *hamstring* dan *joint position sense test* digunakan untuk mengevaluasi proprioseptif sendi lutut. Analisa data dilakukan menggunakan EZR (*Easy R*).

**Hasil:** Seluruh subyek dalam penelitian ini dinyatakan positif *hamstring tightness* dengan rata-rata hasil *active knee extension test* 39.09$^{o}$. Hasil penelitian menunjukkan 48.9% dari total 47 subyek memiliki proprioseptif yang baik dan 51.06% memiliki proprioseptif yang buruk. Analisa korelasi menggunakan *Pearson test* menunjukkan koefisien korelasi sebesar -0.119 ($p>0.05$; 95% CI -0.392-0.174).

**Kesimpulan:** Tidak ada hubungan yang signifikan antara *hamstring tightness* dan proprioseptif sendi lutut. Hasil ini mengindikasikan bahwa *joint position sense* tidak cukup efektif untuk menunjukkan hubungan antara kedua variabel, sehingga komponen proprioseptif yang lain seperti *kinesthesia*, kekuatan otot, luas gerak sendi, dan kelincahan dapat dipertimbangkan.

Kata Kunci: *hamstring tightness,* proprioseptif sendi lutut, *Active Knee Extension Test, Joint Position Sense Test*

# ABSTRACT

**The Correlation between Hamstring Tightness and Knee Joint Proprioception of Male Students in Airlangga University's Vocational School**

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**Background:** Hamstring tightness is an inability to reach ≤20$^{o}$ knee extension when the hip is flexed 90$^{o}$, accompanied by discomfort or pain along the posterior thigh. Proprioception is defined as an ability to integrate sensory signals from mechanoreceptors to determine body segment position and movement in space. The student's sedentary lifestyle that include prolonged sitting hours is one of the main reasons for hamstring tightness and impaired knee proprioception. This study aims to analyze the correlation between hamstring tightness and knee joint proprioception among the male students in Vocational School of Airlangga University Surabaya.

**Methods:** A cross-sectional study was conducted among 47 male students in Vocational Faculty of Airlangga University Surabaya. Active knee extension test was used to assess the hamstring flexibility and joint position sense test was used to assess the knee joint proprioception. The data was analyzed by using EZR (Easy R).

**Results:** All subjects in this study revealed to have experienced a hamstring tightness with active knee extension test's results mean was 39.09$^{o}$. Out of 47 subjects with hamstring tightness, the study showed that 48.9% were classified as good proprioception and 51.06% were classified as poor proprioception. Analysis of correlation by using Pearson test revealed -0.119 as correlation coefficient ($p>0.05$; 95% CI -0.392-0.174).

**Conclusion:** There was no significant correlation between hamstring tightness and knee joint proprioception. This result indicates that joint position sense was not effective enough to show the correlation between the two variables, so other proprioceptive components such as kinesthesia, muscle strength, range of motion, and agility could be considered.

Keywords: hamstring tightness, knee joint proprioception, Active Knee Extension Test, Joint Position Sense Test