

**PENGARUH *JACK KNIFE STRETCHING* DAN *NORDIC
HAMSTRING EXERCISE* TERHADAP FLEKSIBILITAS OTOT
HAMSTRING ATLET FUTSAL**



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diajukan untuk memenuhi sebagian syarat memperoleh gelar sarjana pendidikan

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ABSTRAK

PENGARUH JACK KNIFE STRETCHING DAN NORDIC HAMSTRING EXERCISE TERHADAP FLEKSIBILITAS OTOT HAMSTRING ATLET FUTSAL

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Tujuan penelitian ini adalah untuk mengkaji apakah terdapat pengaruh yang signifikan latihan *jack knife stretching* dan *nordic hamstring exercise* terhadap fleksibilitas otot *hamstring* atlet futsal dan mengkaji apakah terdapat perbedaan pengaruh yang signifikan antara latihan *jack knife stretching* dengan *nordic hamstring exercise* terhadap fleksibilitas otot *hamstring* atlet futsal. Metode yang digunakan dalam penelitian ini eksperimen dengan desain *Two Groups Pretest and Posttest Design*. Populasi dalam penelitian ini adalah siswa putra SMP Negeri 7 Cimahi yang mengikuti ekstrakurikuler futsal sebanyak 22 orang, sedangkan sampel dalam penelitian ini sebanyak 22 orang dengan menggunakan teknik pengambilan sampel yaitu total *sampling*, yang berarti seluruh populasi dijadikan sampel. Lalu sampel dibagi menjadi dua kelompok menggunakan rumus ABBA. Perlakuan dilakukan selama 15 kali pertemuan (3 kali seminggu). Untuk mengukur fleksibilitas otot *hamstring* peneliti menggunakan instrument *sit and reach test*. Uji normalitas data menggunakan Saphiro Wilk, uji pengaruh menggunakan Paired t test, dan uji perbandingan pengaruh menggunakan Independent t test, hasil analisis data menyatakan tidak terdapat perbedaan pengaruh yang signifikan antara hasil *treatment jack knife stretching* dan *nordic hamstring exercise*. Dapat disimpulkan bahwa latihan *jack knife* dan *nordic hamstring exercise* dapat mempengaruhi fleksibilitas otot *hamstring*.

Kata kunci: Fleksibilitas Otot *hamstring*; Futsal; *Jack knife stretching*; *Nordic hamstring exercise*

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ABSTRACT

THE EFFECT OF JACK KNIFE STRETCHING AND NORDIC HAMSTRING EXERCISE ON THE HAMSTRING MUSCLE FLEXIBILITY OF FUTSAL ATHLETES

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The purpose of this study is to examine whether jack knife stretching and Nordic hamstring exercise have a significant effect on the hamstring muscle flexibility of futsal athletes, and to determine whether there is a significant difference in the effects between jack knife stretching and Nordic hamstring exercise on hamstring flexibility. The method used in this research is an experimental method with a Two Groups Pretest and Posttest Design. The population of this study consisted of 22 male students from SMP Negeri 7 Cimahi who participated in the futsal extracurricular program. The sample also consisted of 22 students, selected using the total sampling technique, meaning the entire population was used as the sample. The sample was then divided into two groups using the ABBA formula. The treatment was conducted over 15 sessions (three times a week). To measure hamstring muscle flexibility, the researcher used the Sit and Reach Test instrument. Data normality was tested using the Shapiro-Wilk test, the treatment effect was analyzed using the Paired t-test, and the comparison between treatments was analyzed using the Independent t-test. The results of the data analysis indicated that there was no significant difference in the effects between the jack knife stretching and the Nordic hamstring exercise treatments. It can be concluded that both jack knife stretching and Nordic hamstring exercise have an effect on hamstring muscle flexibility.

Keywords: Futsal; *Hamstring muscles flexibility*; *Jack knife stretching*; *Nordic Hamstring Exercise*

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