

## ABSTRACT

UNIVERSITAS AL-IRSYAD CILACAP

DIPLOMA III FISIOTERAPI

RIFANDA NURKOMARA

NIM : 109120013

KARYA TULIS ILMIAH

### ***APLIKASI TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION DAN DYNAMIC STRETCHING UNTUK MENGURANGI NYERI DAN MENINGKATKAN FLEKSIBILITAS OTOT PADA CEDERA HAMSTRING PEMAIN SEPAKBOLA***

**Consists of 5 CHAPTERS, page 00, figure 00, table 00**

**Background and Purpose of Writing:** Hamstring injury is an injury to the hamstring muscle tissue that often occurs because there is direct or indirect damage due to stretching of the hamstring muscle that exceeds normal limits. The purpose of writing this scientific paper is to determine the effect of the Transcutaneous Electrical Nerve Stimulation modality on the degree of pain and Dynamic Stretching on increasing muscle flexibility in hamstring injured patients.

**Research Methods Used:** In this Scientific Writing report, the author provides physiotherapy measures to Mr. A in the form of Transcutaneous Electrical Nerve Stimulation modality which aims to reduce the effects of pain and Dynamic Stretching which is useful for increasing muscle flexibility, for measurement instruments using the VAS and Sit and Reach Test, the therapeutic measures are carried out 5 times from 6 to 27 March 2023.

**Research Results:** Transcutaneous Electrical Nerve Stimulation and Dynamic Stretching are physiotherapy modalities to treat cases of hamstring injury, after 5 physiotherapy procedures. The report obtained results in the form of a decrease in the degree of pain with the results T1 silent pain: 2/10, motion pain: 3/10, tenderness: 7/10 to T5 silent pain: 0/10, motion pain: 0/10, tenderness: 0/10 and obtained an increase in the values of muscle flexibility with the results T1: 17cm (Below Average) to T5: 25cm (Above Average).

TENS is able to reduce pain through a segmental mechanism by activating A beta fibers which will inhibit nociceptive neurons so that pain is reduced.

Dynamic Stretching can increase muscle flexibility by

**Conclusion:** After being given 5 physiotherapy measures, the results obtained were a decrease in the degree of pain and an increase in muscle flexibility by administering the modalities Transcutaneous Electrical Nerve Stimulation and Dynamic Stretching.

**Keywords :** Hamstring Injury, Transcutaneous Electrical Nerve Stimulation, Dynamic Stretching