

**KORELASI ANTARA KADAR TESTOSTERON DENGAN
KEMAMPUAN MEMORI JANGKA PENDEK PADA MAHASISWA
FAKULTAS KEDOKTERAN UNSOED**

ABSTRAK

Testosteron merupakan hormon seks utama pada laki-laki yang disekresikan oleh testis. Testosteron pada umumnya bertanggung jawab terhadap berbagai sifat maskulinisasi tubuh dan juga berperan pada sistem saraf pusat yaitu meningkatkan perilaku agresif, inisiatif, dan konsentrasi serta kemampuan kognitif dengan berperan dalam pertumbuhan saraf dan proses aromatisasi. Elemen pokok fungsi kognitif adalah memori. Salah satu jenis memori yaitu memori jangka pendek. Kecepatan proses kognitif diketahui bergantung pada derajat aktivasi memori jangka pendek. Penelitian ini bertujuan untuk mengetahui korelasi kadar testosteron dengan kemampuan memori jangka pendek mahasiswa FK Unsoed. Penelitian ini adalah penelitian observasional analitik dengan pendekatan *cross sectional*. Jumlah subjek dalam penelitian ini adalah 44 mahasiswa yang diambil dengan metode *consecutive sampling*, dengan kriteria inklusi yaitu jenis kelamin laki-laki, usia 18-25 tahun, tidak memiliki riwayat trauma kepala, dan menyetujui *informed consent*. Pengukuran kadar testosteron menggunakan metode *Salimetrics* ELISA. Pengukuran memori jangka pendek menggunakan metode *Digit Span Test*. Uji normalitas data menggunakan uji *Saphiro-Wilk* dan uji korelasi non-parametrik *spearman*. Subjek penelitian memiliki rerata kadar testosteron normal, yaitu $47,09 \pm 23,73$ pg/mL dan rerata kemampuan memori jangka pendek rata-rata yaitu $10,68 \pm 2,03$. Hasil uji korelasi *spearman* menunjukkan nilai $r = 0,050$ dan nilai $p = 0,749$ sehingga dapat disimpulkan tidak terdapat korelasi antara kadar testosteron dengan kemampuan memori jangka pendek.

Kata kunci: *testosteron, kemampuan memori jangka pendek, digit span test.*

CORRELATION BETWEEN TESTOSTERONE LEVELS WITH SHORT-TERM MEMORY ABILITY ON STUDENTS OF MEDICAL FACULTY OF UNSOED

ABSTRACT

Testosterone is the main male sex hormone secreted by the testes. Testosterone is generally responsible for various masculinizing properties of the body and also plays a role in the central nervous system, namely increasing aggressive behavior, initiative, and concentration as well as cognitive abilities by playing a role in nerve growth and aromatization processes. An essential element of cognitive function is memory. One type of memory is short term memory. The speed of cognitive processing is known to depend on the degree of activation of short-term memory. This study aims to determine the correlation between testosterone levels and the short-term memory abilities of FK Unsoed students. This study was an analytic observational study with a cross sectional approach. The number of subjects in this study were 44 students who were taken by consecutive sampling method, with inclusion criteria, namely male gender, age 18-25 years, had no history of head trauma, and agreed to the informed consent. Testosterone levels were measured using the Salimetrics ELISA method. Short term memory measurement using the Digit Span Test method. The data normality test used the Saphiro-Wilk test and the non-parametric Spearman correlation test. The subjects of the study had a normal mean testosterone level, namely 47.09 ± 23.73 pg / mL and an average short-term memory ability of 10.68 ± 2.03 . The result of the Spearman correlation test shows the value of $r = 0.050$ and the value of $p = 0.749$, so it can be concluded that there is no correlation between testosterone levels and short-term memory abilities.

Key words: testosterone, short-term memory ability, digit span test.