KORELASI KAPASITAS VITAL PARU DENGAN *HEART RATE VARIABILITY* MAHASISWI FAKULTAS KEDOKTERAN UNIVERSITAS JENDERAL SOEDIRMAN

ABSTRAK

Latar Belakang: Prevalensi penyakit sistem kardiovaskular di Jawa Tengah termasuk tinggi. *Heart rate variability* (HRV) di kalangan mahasiswa kedokteran tergolong rendah. *Heart rate variability* merupakan marka non-invasif yang menggambarkan keseimbangan sistem saraf otonom pada sistem kardiovaskular. *Heart rate variability* dipengaruhi oleh beberapa faktor. Salah satu faktor yang mempengaruhi HRV adalah fungsi paru. Terdapat sinkronisasi antara sistem respiratori dan kardiovaskular tetapi belum terdapat penjelasan spesifik mengenai korelasi kapasitas vital paru dengan HRV

Tujuan: Untuk mengetahui korelasi kapasitas vital paru dengan *heart rate variability* pada mahasiswi FK Unsoed.

Metode: Penelitian ini merupakan penelitian observasional analitik dengan pendekatan *cross sectional.* Jumlah subjek penelitian ini sebanyak 31 mahasiswi yang ditentukan dengan metode *consecutive sampling*. Pengukuran kapasitas vital paru dilakukan dengan pengukuran FVC menggunakan spirometer. Pengukuran HRV menggunakan POLAR M400 *heart rate monitor* yang dihubungkan dengan aplikasi *Welltory* dengan mengukur parameter HRV berupa SDNN (*standard deviation of normal to normal).* Analisis bivariat menggunakan uji parametrik korelatif *Pearson.*

Hasil: Hasil uji korelasi *Pearson* FVC dengan SDNN menunjukkan nilai r = 0.282 dan p = 0.124 sehingga tidak terdapat korelasi antara FVC dan SDNN.

Kesimpulan: Tidak terdapat korelasi antara kapasitas vital paru dengan HRV pada mahasiswi FK Unsoed

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Kata kunci: kapasitas vital paru, *heart rate variability*

CORRELATION OF VITAL LUNG CAPACITY AND HEART RATE VARIABILITY ON FEMALE STUDENTS OF MEDICAL FACULTY OF JENDERAL SOEDIRMAN UNIVERSITY

ABSTRAK

Background: *The prevalence of cardiovascular disease in Central Java is high and the heart rate variability (HRV) among medical students is low. Heart rate variability is a non-invasive marker that describes the balance of the autonomic nervous system in the cardiovascular system. Heart rate variabilityis influenced by several factors. One of the factors that affect HRV is lung function. There is synchronization between the respiratory and cardiovascular systems. However, there is not much of explanation about the correlation between vital lung capacity and HRV.*

Aim: *To determine the correlation of lung vital capacity and heart rate variability in female students of FK Unsoed.*

Method: *This research is an analytic observational study with cross sectional approach. The number of subjects in this study were 31 female students who were determined by the consecutive sampling method. Lung vital capacity was measured by measuring FVC using a spirometer. Heart rate variability measurement was done using a POLAR M400 heart rate monitor connected to the Welltory application by measuring the HRV parameter in the form of SDNN (standard deviation of normal to normal). Bivariate analysis used Pearson's correlative parametric test.*

Result: *The results of the Pearson correlation test between FVC and SDNN showed a value of r = 0.282 and p = 0.124.*

Summary: *There is no correlation between heart rate variability and vital lung capacity*

Key words: *vital lung capacity, heart rate variability*