

**FAKULTAS KEDOKTERAN  
UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA**

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***HEART RATE VARIABILITY* PADA MAHASISWA PENYINTAS COVID-19  
DI FAKULTAS KEDOKTERAN UPN “VETERAN” JAKARTA**

**ABSTRAK**

COVID-19 meningkatkan berbagai risiko penyakit, diantaranya penyakit pada sistem kardiovaskular dan sistem saraf otonom. Penelitian ini bertujuan untuk mengetahui *heart rate variability* yang merupakan salah satu indikator fungsi sistem saraf otonom dan sistem kardiovaskular pada mahasiswa penyintas COVID-19 di FK UPN “Veteran” Jakarta tahun 2023. Penelitian menggunakan desain *case-control* dan teknik *purposive sampling*. Besar sampel sebanyak 42 mahasiswa sesuai kriteria penelitian. Riwayat terinfeksi COVID-19 diukur menggunakan kuesioner. *Heart rate variability* diukur menggunakan alat *Heart Rate Variability (HRV) Analyzer SA-3000P*. Tidak terdapat perbedaan karakteristik usia, jenis kelamin, dan tingkat stres antar kelompok COVID-19 dan kontrol ( $p > 0,05$ ). Hasil uji statistik didapatkan perbedaan RMSSD dan VLF yang signifikan antara kedua kelompok ( $p < 0,05$ ). Hasil uji *Chi-square* menunjukkan terdapat hubungan yang signifikan antara riwayat COVID-19 dengan HRV pada domain waktu RMSSD  $> 40$  ( $p = 0,029$ ; OR = 5,2; CI = 1,4 – 19,8). Kelompok dengan riwayat COVID-19 berisiko 5,2 kali lipat memiliki RMSSD  $> 40$  dibandingkan kelompok kontrol yang menandakan meningkatnya aktivitas sistem saraf parasimpatis.

**Kata Kunci:** COVID-19, *Heart Rate Variability*, Kardiovaskular, Sistem Saraf Otonom, Mahasiswa Kedokteran

**UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA**

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**HEART RATE VARIABILITY IN COVID-19 SURVIVOR STUDENTS AT  
THE FACULTY OF MEDICINE UPN “VETERAN” JAKARTA**

**ABSTRACT**

*COVID-19 increases various disease risks, including diseases of the cardiovascular system and the autonomic nervous system. This research aims to determine heart rate variability, which is one of the indicators of the functioning of the autonomic nervous system and cardiovascular system in COVID-19 survivor students at the Faculty of Medicine, UPN 'Veteran' Jakarta in 2023. The study utilized a case-control design and purposive sampling technique. The sample size consisted of 42 students based on the research criteria. The history of COVID-19 infection was measured using a questionnaire. Heart rate variability was measured using the Heart Rate Variability (HRV) Analyzer SA-3000P. There were no differences in age, gender, and stress levels between the COVID-19 and control groups ( $p > 0.05$ ). The statistical test results revealed significant differences in RMSSD and VLF between the two groups ( $p < 0.05$ ). The Chi-square test results indicated a significant association between a history of COVID-19 and HRV in the RMSSD  $> 40$  time domain ( $p = 0.029$ ; OR = 5.2; CI = 1.4 – 19.8). The group with a history of COVID-19 is at a 5.2 times higher risk of having RMSSD  $> 40$  compared to the control group, indicating increased activity of the parasympathetic nervous system.*

**Keywords :** *COVID-19, Heart Rate Variability, Cardiovascular, Autonomic Nervous System, Medical Students*