

ABSTRAK

Lingkungan tempat tinggal seperti temperatur, iklim, dan ketinggian tempat tinggal akan berdampak pada perubahan fisiologis seseorang. Tekanan oksigen pada dataran tinggi dan dataran rendah sangatlah berbeda, seseorang yang tinggal di dataran tinggi akan teraklimatisasi sehingga terjadi peningkatan fungsi paru dan nilai hemoglobin. Tujuan penelitian ini mengetahui perbandingan fungsi paru dan nilai hemoglobin antara karyawan rumah sakit di dataran tinggi dan karyawan rumah sakit di dataran rendah.

Desain penelitian bersifat analitik dengan rancang potong lintang terhadap 31 orang subjek pada masing-masing kelompok yang berprofesi sebagai karyawan rumah sakit di dataran tinggi dan karyawan rumah sakit di dataran rendah. Terlebih dahulu dilakukan pengukuran data statistik fisik berupa usia (tahun), selanjutnya dilakukan pengukuran fungsi paru menggunakan parameter FEV₁ dan pengukuran nilai hemoglobin metode Sahli, kemudian dibandingkan antara kedua kelompok karyawan rumah sakit tersebut.

Hasil penelitian menunjukkan bahwa nilai FEV₁ rata-rata karyawan rumah sakit di dataran tinggi (2,98 L, *range* 1,66–3,5 L) dan karyawan rumah sakit di dataran rendah (2,61 L, *range* 2,13–3,36 L) dengan nilai $p=0,000$. Nilai hemoglobin rata-rata karyawan rumah sakit di dataran tinggi (15,91, *range* 14,8–17) dan karyawan rumah sakit di dataran rendah (14,72, *range* 13,6–16,2) dengan nilai $p=0,000$.

Simpulan hasil penelitian menunjukkan fungsi paru yang digambarkan dengan FEV₁ dan nilai hemoglobin karyawan rumah sakit di dataran tinggi lebih baik daripada karyawan rumah sakit di dataran rendah.

Kata kunci: Dataran rendah, dataran tinggi, FEV₁, nilai hemoglobin.

ABSTRACT

Living environment such as temperature, climate, and altitude of residence will have an impact on the physiological changes a person. The pressure of oxygen in the highlands and lowlands are very different, someone who lived in the highlands will undergo acclimatization resulting in increased lung function and hemoglobin values. Purpose of this study was compare the pulmonary function and hemoglobin values between hospital employees in the highlands and hospital employees in the lowlands

Method of the study is analytic with cross-sectional design of the 31 subjects in each group who work as employees of a hospital in the highlands and hospital employees in the lowlands. First performed the statistical data measuring the physical form of the age (years), further measurements of lung function parameter FEV₁ and measurement using hemoglobin values Sahli method, then compared between the two groups of employees of the hospital.

The results showed that the average FEV₁ hospital employees in the highlands (2,98 L, range 1.66–3.5 L) and hospital employees in the lowlands (2.61 L, range 2.13–3.36 L) with p=0.000. The average hemoglobin value of hospital employees in the highlands (15.91, range 14,8–17) and a hospital employee in the lowlands (14.72, range 13.6–16.2) with p=0.000.

The results showed that concluded lung function was described by FEV₁ and hospital employees hemoglobin values in the highlands hospital employees is better than hospital employees in the lowlands.

Key words: FEV₁, hemoglobin values, highland, lowland