

ABSTRACT

MEAN DIFFERENCES IN THE NUMBER OF LEUKOCYTES IN UNDERNOURISHED CHILDREN AND WELL NOURISHED CHILDREN AT SDN 2 NEGLASARI SOUTH LAMPUNG

By

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Background: Undernutrition is a condition of insufficient nutrition that a person's body needs. The incidence of undernutrition in Indonesia is 17.7% and 7% in Lampung Province. Undernutrition can disrupt processes that occur in the body, such as the production of leukocytes. A decrease in the number of leukocytes in the body can increase the risk of infection thus worsening the condition of undernutrition. The aim of this study was to determine the difference of mean leukocyte in malnourished children and well-nourished children in SDN 2 Neglasari South Lampung.

Method: this research use cross-sectional research design with simple random sampling technique. The total sample was 63 children. Measurement of nutritional status is assessed based on BMI for age that classified into three groups there are well-nourished, moderate malnutrition, and severe malnutrition. Meanwhile, the number of leukocytes was measured using the flow cytometry method. Data were analyzed univariately and bivariately using the One Way ANOVA test.

Results: Based on univariate analysis showed that the well-nourished group is 58.7%, moderate malnutrition group is 25.4%, and severely malnutrition group is 15.9%. The mean leukocyte count for all respondents is $8.0852 \times 10^3/\mu\text{L}$. In comparison the mean number of leukocytes in well-nourished group is $8.2441 \times 10^3/\mu\text{L}$, in moderate malnutrition group is $8.1644 \times 10^3/\mu\text{L}$, and in severely malnutrition group is $7.3710 \times 10^3/\mu\text{L}$. Based on bivariate analysis, there was no significant difference between the mean number of leukocytes in cases of undernutrition and well-nourished ($p = 0.202$)

Conclusion: There is no significant difference in the mean number of leukocytes in cases of undernutrition and well-nourished children at SDN 2 Neglasari, South Lampung.

Key words: Leukocyte count, undernutrition, nutritional status

ABSTRAK

PERBEDAAN RERATA JUMLAH LEUKOSIT PADA KASUS ANAK *UNDERNUTRITION* DENGAN ANAK GIZI BAIK DI SDN 2 NEGLASARI LAMPUNG SELATAN

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Latar Belakang: *Undernutrition* merupakan kondisi kekurangan atau nutrisi yang diperlukan tubuh seseorang. *Undernutrition* dapat mengganggu proses yang terjadi di dalam tubuh seperti pembentukan leukosit. Penurunan jumlah leukosit di dalam tubuh dapat meningkatkan resiko terpapar infeksi sehingga memperburuk kondisi *undernutrition*. Tujuan penelitian ini untuk mengetahui perbedaan rerata jumlah leukosit pada anak dengan *undernutrition* dengan anak gizi baik di SDN 2 Neglasari Lampung Selatan

Metode: Desain penelitian *cross-sectional* dengan teknik pengambilan sampel secara *simple random sampling*. Jumlah sampel penelitian sebesar 63 anak. Pengukuran status gizi dinilai berdasarkan IMT/U yang dibagi ke dalam tiga kelompok, yaitu gizi baik, gizi kurang, dan gizi buruk. Sedangkan, jumlah leukosit diukur dengan menggunakan metode *flow cytometri*. Data dianalisis secara univariat dan bivariat yang dilakukan dengan uji *One Way ANOVA*.

Hasil: Pada analisis univariat, gambaran status gizi baik sebesar 58,7%, gizi kurang 25,4%, dan gizi buruk 15,9%. Didapatkan rerata jumlah leukosit seluruh responden sebesar $8,0852 \times 10^3/\mu\text{L}$. Sedangkan rerata jumlah leukosit pada gizi baik $8,2441 \times 10^3/\mu\text{L}$, gizi kurang $8,1644 \times 10^3/\mu\text{L}$, dan gizi buruk $7,3710 \times 10^3/\mu\text{L}$. Pada analisis bivariat, tidak didapatkan ada perbedaan signifikan antara rerata jumlah leukosit pada kasus *undernutrition* dengan gizi baik ($p = 0,202$)

Kesimpulan: Tidak terdapat perbedaan signifikan rerata jumlah leukosit pada kasus *undernutrition* dengan anak gizi baik di SDN 2 Neglasari, Lampung Selatan.

Kata kunci : Jumlah leukosit, *undernutrition*, status gizi