

ABSTRAK

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HUBUNGAN POLA KONSUMSI *ULTRA PROCESSED FOOD* DENGAN KADAR HEMOGLOBIN PADA REMAJA PUTRI DI SMP NEGERI 2 TASIKMALAYA TAHUN 2025

Remaja putri adalah kelompok yang paling rentan mengalami penurunan kadar hemoglobin (Hb). Kebiasaan mengonsumsi *Ultra Processed Food* (UPF) berpotensi menurunkan kadar Hb pada remaja putri karena kandungan zat aditif yang tinggi dapat meningkatkan stres oksidatif yang menyebabkan inflamasi sehingga memicu anemia. Penelitian ini bertujuan untuk menganalisis hubungan pola konsumsi UPF dengan kadar Hb pada remaja putri. Penelitian ini merupakan penelitian observasional menggunakan desain *cross sectional* dengan subjek sebanyak 81 siswi SMP Negeri 2 Tasikmalaya yang dipilih melalui teknik *proportional stratified random sampling*. Variabel kadar Hb diukur menggunakan *HemoCue® 201+*. Pola konsumsi UPF yang meliputi jumlah dan kebiasaan konsumsi UPF, serta konsumsi protein hewani dan zat besi heme dalam UPF diukur menggunakan *Semi Quantitative Food Frequency Questionnaire* (SQ-FFQ). Analisis data menggunakan uji korelasi *Spearman Rank* dan pemodelan regresi linier ganda. Rerata kadar Hb subjek 11,96 g/dL dengan kejadian anemia sebanyak 42%. Rerata skor kebiasaan konsumsi UPF adalah 350. Uji statistik menunjukkan bahwa kebiasaan konsumsi UPF ($p=0,815$), jumlah konsumsi UPF ($p=0,906$), konsumsi protein hewani dalam UPF ($p=0,743$), konsumsi zat besi heme dalam UPF ($p=0,950$), konsumsi vitamin C ($p=0,395$), dan kebiasaan konsumsi kopi ($p=0,413$) tidak berhubungan secara signifikan dengan kadar Hb. Variabel *confounding* konsumsi protein hewani harian ($p=0,000$; $\rho=0,582$), konsumsi zat besi heme harian ($p=0,001$; $\rho=0,356$), dan kebiasaan konsumsi teh ($p=0,003$; $\rho=-0,322$) berhubungan secara signifikan dengan kadar Hb. Berdasarkan hasil pemodelan regresi linier ganda menunjukkan konsumsi protein hewani harian menjadi faktor dominan yang berhubungan dengan kadar Hb subjek ($p=0,000$; $\beta=0,504$). Kejadian anemia pada remaja putri di SMP Negeri 2 Tasikmalaya masih tinggi, dan konsumsi protein hewani harian menjadi faktor yang berhubungan dengan kadar Hb. Remaja putri perlu memperhatikan konsumsi protein hewani baik dalam menu makan utama maupun jajanan.

Kata kunci: kadar hemoglobin; anemia; *ultra processed food*; remaja putri; zat besi

ABSTRACT

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**THE RELATIONSHIP BETWEEN ULTRA PROCESSED FOOD
CONSUMPTION PATTERNS AND HEMOGLOBIN LEVELS IN FEMALE
ADOLESCENT AT SMP NEGERI 2 TASIKMALAYA**

Adolescent girls are the most vulnerable group to experience a decline in hemoglobin (Hb) levels. The habit of consuming Ultra Processed Food (UPF) has the potential to lower Hb levels in adolescent girls due to the high content of additives that can increase oxidative stress, leading to inflammation and triggering anemia. This study aims to analyze the relationship between UPF consumption patterns and Hb levels in adolescent girls. This research is an observational study using a cross-sectional design with 81 subjects, eighth-grade female students from SMP Negeri 2 Tasikmalaya selected through proportional stratified random sampling. The Hb levels were measured using HemoCue® 201+. The UPF consumption pattern, including the amount and habits of UPF consumption, as well as the intake of animal protein and heme iron in UPF, was assessed using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ). Data analysis was performed using Spearman's Rank correlation test and multiple linear regression modeling. The average Hb level of subjects is 11.96 g/dL with an incidence of anemia at 42%. The average score of UPF consumption habits is 350. Statistical tests indicate that UPF consumption habits ($p=0.815$), the amount of UPF consumed ($p=0.906$), animal protein consumption in UPF ($p=0.743$), heme iron consumption in UPF ($p=0.950$), vitamin C consumption ($p=0.395$), and coffee consumption habits ($p=0.413$) are not significantly related to Hb levels. Confounding variables such as daily animal protein consumption ($p=0.000$; $\rho=0.582$), daily heme iron consumption ($p=0.001$; $\rho=0.356$), and tea consumption habits ($p=0.003$; $\rho=-0.322$) are significantly related to Hb levels. Based on the results of multiple linear regression modeling, daily animal protein consumption is the dominant factor related to the subjects' Hb levels ($p=0.000$; $\beta=0.504$). The incidence of anemia among adolescent girls in SMP Negeri 2 Tasikmalaya is still high, and daily animal protein consumption is the associated factor with Hb levels. Adolescent girls need to pay attention to the consumption of animal protein both in their main meals and snacks.

Keywords: hemoglobin levels, anemia; ultra processed food; adolescent girls; iron