

STUDY ON THE CHARACTERISTICS OF FEMALE ADOLESCENTS IN RELATION TO PROTEIN AND IRON INTAKE IN BANGUNCIPTO VILLAGE

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ABSTRACT

Background: Adolescence is a rapid growth phase requiring adequate macro and micronutrient intake. Female adolescents are vulnerable to malnutrition and iron deficiency anemia due to routine blood loss during menstruation.

Objective: To analyze the characteristics, protein and iron intake, the correlation between these variables, and their relationship with the incidence of anemia among adolescent girls in Banguncipto Village.

Method: This observational study with a cross-sectional design was conducted in April 2026 in Banguncipto Village, Sentolo, Kulon Progo. A sample of 30 adolescent girls was selected using a purposive sampling technique. Dietary intake data were collected via 3x24-hour food recall interviews, nutritional status was assessed based on the BMI-for-age index, and hemoglobin (Hb) levels were measured via capillary blood. Data were analyzed using univariate and bivariate analysis with Fisher's Exact Test.

Results: The majority of respondents were aged 10–16 years (66,7%), had lower education $\leq$ JHS (60,0%), had highly educated fathers (70,0%), highly educated mothers (80,0%), and family income above the minimum wage (83,3%). About 60,0% of respondents had good nutritional status, 76,7% had adequate protein intake, 73,3% had adequate iron intake, and 23,3% suffered from anemia. Bivariate analysis showed a significant correlation between father's education and adolescent girls' iron intake ($p = 0,032$). No significant relationship was found between other demographic characteristics or nutritional status and the levels of iron and protein intake ($p > 0,05$). Notably, there was a highly significant relationship between both protein intake ($p = 0,0001$) and iron intake ($p = 0,0001$) with the incidence of anemia.

Conclusion: Father's education level significantly influences the adequacy of iron food allocation within the family. The equal availability and affordability of local plant-based protein sources make iron intake unrelated to socio-economic status. Synergistic adequacy of both macronutrient (protein) and micronutrient (iron) intake is proven to be an absolute key factor in preventing anemia among adolescent girls.

Keywords: Female Adolescents, Characteristics, Protein Intake, Iron, Anemia.

KAJIAN KARAKTERISTIK REMAJA PUTRI DENGAN ASUPAN PROTEIN DAN ZAT BESI DI DESA BANGUNCIPTO

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ABSTRAK

Latar Belakang: Masa remaja merupakan fase pertumbuhan cepat yang menuntut kecukupan gizi makro dan mikro. Remaja putri termasuk kelompok rentan malnutrisi dan anemia defisiensi besi akibat kehilangan darah rutin selama siklus menstruasi.

Tujuan: Menganalisis karakteristik, gambaran asupan protein dan zat besi, serta kaitan antar-variabel tersebut hingga hubungannya dengan kejadian anemia pada remaja putri di Desa Banguncipto.

Metode: Penelitian observasional dengan desain cross-sectional ini dilaksanakan pada bulan April 2026 di Desa Banguncipto, Sentolo, Kulon Progo. Sampel penelitian berjumlah 30 remaja putri yang dipilih menggunakan teknik purposive sampling. Data asupan gizi dikumpulkan melalui wawancara *food recall* 3x24 jam, status gizi dinilai berdasarkan indeks IMT/U, dan kadar hemoglobin (Hb) diukur melalui darah kapiler. Analisis data menggunakan analisis univariat dan bivariat dengan uji *Fisher's Exact Test*.

Hasil: Mayoritas responden berusia 10–16 tahun (66,7%), berpendidikan $\leq$ SMP (60,0%), memiliki ayah berpendidikan tinggi (70%), ibu berpendidikan tinggi (80,0%), dan pendapatan keluarga di atas UMR (83,3%). Sebanyak 60% responden memiliki status gizi normal, 73,3% memiliki asupan protein cukup, 76,7% memiliki asupan zat besi cukup, dan 23,3% mengalami anemia. Hasil uji bivariat menunjukkan adanya hubungan yang signifikan antara pendidikan ayah dengan asupan zat besi remaja putri ($p = 0,032$). Tidak ditemukan kaitan signifikan antara karakteristik demografi lain maupun status gizi dengan tingkat asupan zat besi dan protein ($p > 0,05$). Namun, terdapat hubungan yang sangat signifikan antara asupan protein ($p = 0,0001$) dan asupan zat besi ($p = 0,0001$) dengan kejadian anemia.

Kesimpulan: Pendidikan ayah memengaruhi kecukupan asupan zat besi di tingkat keluarga. Meratanya ketersediaan pangan nabati lokal yang terjangkau membuat asupan protein tidak berkaitan dengan status sosial ekonomi. Sinergi kecukupan asupan gizi makro (protein) dan mikro (zat besi) terbukti menjadi faktor kunci mutlak dalam pencegahan kejadian anemia pada remaja putri.

Kata Kunci: Remaja Putri, Karakteristik, Asupan Protein, Zat Besi, Anemia.