

THE EFFECTIVENESS OF CONSUMING A COMBINATION OF IRON-FOLIC ACID TABLETS AND VITAMIN C VERSUS IRON-FOLIC ACID TABLETS ALONE ON INCREASING HEMOGLOBIN LEVELS AMONG GRADE X FEMALE STUDENTS AT SMA NEGERI 1 WATES IN 2026

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ABSTRACT

Background: Anemia among adolescent girls remains a common public health problem due to the increased iron requirements during growth and blood loss during menstruation. One of the strategies to prevent anemia is the administration of Iron-Folic Acid (IFA) tablets, either alone or in combination with vitamin C, which enhances iron absorption.

Objective: This study aimed to determine the difference in the effect of consuming a combination of Iron-Folic Acid (IFA) tablets and vitamin C compared with IFA tablets alone on increasing hemoglobin levels among adolescent girls at SMA Negeri 1 Wates and SMA Negeri 2 Wates.

Methods: This study employed a quantitative approach using a quasi-experimental design with a pretest-posttest control group design. A total of 72 respondents were recruited and divided into an experimental group and a control group, each consisting of 36 participants. The experimental group received a combination of IFA tablets and vitamin C, while the control group received IFA tablets only. Data were analyzed using the Wilcoxon Signed Rank Test, Paired Sample t-Test, and Mann-Whitney U Test.

Results: In the IFA-vitamin C combination group, the mean hemoglobin level increased from 10.68 ± 1.19 g/dL to 12.68 ± 0.59 g/dL ($p < 0.001$). In the IFA-only group, the mean hemoglobin level increased from 10.61 ± 1.03 g/dL to 12.12 ± 0.81 g/dL ($p < 0.001$). The effectiveness analysis between groups showed that the mean increase in hemoglobin level was 1.99 ± 1.06 g/dL in the IFA-vitamin C combination group and 1.65 ± 1.17 g/dL in the IFA-only group, with a p-value of 0.207.

Conclusion: Both the combination of IFA tablets and vitamin C and IFA tablets alone significantly increased hemoglobin levels among adolescent girls. However, there was no statistically significant difference in effectiveness between the two interventions in improving hemoglobin levels.

Keywords: anemia, adolescent girls, hemoglobin levels, iron-folic acid tablets, vitamin C.

EFEKTIVITAS KONSUMSI KOMBINASI TABLET TAMBAH DARAH-VITAMIN C DAN TABLET TAMBAH DARAH TERHADAP PENINGKATAN KADAR HEMOGLOBIN PADA REMAJA PUTRI KELAS X DI SMA NEGERI 1 WATES TAHUN 2026

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ABSTRAK

Latar Belakang: Anemia pada remaja putri masih menjadi masalah kesehatan yang sering terjadi akibat meningkatnya kebutuhan zat besi selama masa pertumbuhan dan kehilangan darah saat menstruasi. Upaya pencegahan anemia dapat dilakukan melalui pemberian Tablet Tambah Darah serta kombinasi vitamin C yang berperan dalam meningkatkan penyerapan zat besi.

Tujuan: Penelitian ini bertujuan untuk mengetahui perbedaan pengaruh konsumsi Kombinasi Tablet Tambah Darah-Vitamin C dan Tablet Tambah Darah terhadap peningkatan kadar hemoglobin pada remaja putri di SMA Negeri 1 Wates dan SMA Negeri 2 Wates.

Metode: Penelitian ini menggunakan pendekatan kuantitatif dengan desain quasi experiment menggunakan *pretest-posttest with control group design*. Sampel penelitian sebanyak 72 responden yang dibagi menjadi kelompok eksperimen dan kelompok kontrol masing-masing 36 responden. Kelompok eksperimen diberikan Kombinasi Tablet Tambah Darah dan vitamin C, sedangkan kelompok kontrol diberikan Tablet Tambah Darah saja. Analisis data menggunakan uji *Wilcoxon Signed Rank Test*, *Paired Sample t-Test*, dan *Mann-Whitney U Test*.

Hasil: Pada kelompok Kombinasi Tablet Tambah Darah-vitamin C, rata-rata kadar hemoglobin meningkat dari $10,68 \pm 1,19$ g/dL menjadi $12,68 \pm 0,59$ g/dL dengan nilai $p=0,000$. Pada kelompok Tablet Tambah Darah, rata-rata kadar hemoglobin meningkat dari $10,61 \pm 1,03$ g/dL menjadi $12,12 \pm 0,81$ g/dL dengan nilai $p=0,000$. Hasil uji efektivitas antar kelompok menunjukkan rata-rata peningkatan kadar hemoglobin pada kelompok Kombinasi Tablet Tambah Darah dan vitamin C sebesar $1,99 \pm 1,06$ g/dL, sedangkan pada kelompok Tablet Tambah Darah sebesar $1,65 \pm 1,17$ g/dL dengan nilai $p=0,207$.

Kesimpulan: Pemberian Kombinasi Tablet Tambah Darah-vitamin C maupun Tablet Tambah Darah saja sama-sama meningkatkan kadar hemoglobin secara signifikan pada remaja putri. Namun, efektivitas tidak yang signifikan antara kedua intervensi terhadap peningkatan kadar hemoglobin.

Kata kunci: anemia, remaja putri, kadar hemoglobin, tablet tambah darah, vitamin C