

**EFEKTIVITAS PEMBERIAN *DARK CHOCOLATE* DAN JUS WORTEL
TERHADAP PENURUNAN NYERI HAID PADA MAHASISWI
JURUSAN KEBIDANAN POLTEKKES KEMENKES
YOGYAKARTA**

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ABSTRAK

Latar Belakang: Dismenore merupakan gangguan menstruasi yang dialami sekitar 64,25% perempuan di Indonesia dan dapat mengganggu aktivitas belajar, konsentrasi, serta produktivitas. *Dark chocolate* mengandung magnesium, flavonoid, dan polifenol yang berperan menghambat pembentukan prostaglandin dan merelaksasi otot uterus, sedangkan jus wortel mengandung beta-karoten, vitamin A, dan vitamin E yang memiliki efek antioksidan dan antiinflamasi sehingga berpotensi menurunkan nyeri haid.

Tujuan: Mengetahui efektivitas pemberian *dark chocolate* dan jus wortel terhadap penurunan nyeri haid pada mahasiswa Jurusan Kebidanan Poltekkes Kemenkes Yogyakarta.

Metode: Penelitian ini menggunakan desain *quasi-experimental* dengan pendekatan *pretest-posttest with control group design*. Sampel berjumlah 44 responden yang dipilih menggunakan teknik *consecutive sampling*. Tingkat nyeri haid diukur menggunakan *Numeric Rating Scale* (NRS). Analisis data menggunakan uji *Wilcoxon Signed Ranks Test* dan *Mann-Whitney U Test*.

Hasil: Karakteristik responden pada kedua kelompok relatif serupa. Pada kelompok *dark chocolate*, tingkat nyeri berubah dari kategori sedang dan berat menjadi ringan dan sedang, dengan rata-rata menurun dari $6,18 \pm 1,097$ menjadi $3,77 \pm 1,307$. Pada kelompok jus wortel, rata-rata nyeri menurun dari $5,91 \pm 1,019$ menjadi $4,95 \pm 0,722$, namun mayoritas tetap mengalami nyeri sedang. Hasil uji Wilcoxon menunjukkan penurunan bermakna pada kedua kelompok ($p < 0,001$). Rata-rata penurunan nyeri pada kelompok *dark chocolate* ($2,41 \pm 1,260$) lebih besar dibandingkan jus wortel ($0,95 \pm 0,653$), dan hasil uji Mann-Whitney menunjukkan perbedaan bermakna ($Z = -3,799$; $p < 0,001$).

Kesimpulan: *Dark chocolate* dan jus wortel sama-sama menurunkan nyeri haid, namun *dark chocolate* lebih efektif dibandingkan jus wortel pada mahasiswa Jurusan Kebidanan Poltekkes Kemenkes Yogyakarta.

Kata kunci: *Dark Chocolate*, Jus Wortel, Nyeri Haid.

**EFFECTIVENESS OF DARK CHOCOLATE AND CARROT JUICE IN
REDUCING MENSTRUAL PAIN AMONG MIDWIFERY STUDENTS
AT POLTEKKES KEMENKES YOGYAKARTA**

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ABSTRAC

Background: Dysmenorrhea affects approximately 64.25% of women in Indonesia and may impair academic performance, concentration, and daily productivity. Dark chocolate contains magnesium, flavonoids, and polyphenols that may reduce prostaglandin synthesis and promote uterine muscle relaxation, whereas carrot juice is rich in beta-carotene, vitamin A, and vitamin E, which possess antioxidant and anti-inflammatory properties that may alleviate menstrual pain.

Objective: To compare the effectiveness of dark chocolate and carrot juice in reducing menstrual pain among female Midwifery students at Poltekkes Kemenkes Yogyakarta.

Methods: A quasi-experimental study with a pretest–posttest control group design was conducted involving 44 participants selected using consecutive sampling, comprising 22 participants in the intervention group and 22 in the control group. Menstrual pain intensity was assessed using the Numeric Rating Scale (NRS). Data were analyzed using the Wilcoxon Signed-Rank Test and the Mann–Whitney U Test.

Results: Baseline characteristics were comparable between groups. In the dark chocolate group, pain severity decreased from predominantly moderate and severe pain to predominantly mild and moderate pain, with the mean pain score declining from 6.18 ± 1.097 to 3.77 ± 1.307 . In the carrot juice group, the mean pain score decreased from 5.91 ± 1.019 to 4.95 ± 0.722 , although most participants remained in the moderate pain category. The Wilcoxon Signed-Rank Test demonstrated a significant reduction in pain intensity in both groups ($p < 0.001$). The mean reduction in pain score was greater in the dark chocolate group (2.41 ± 1.260) than in the carrot juice group (0.95 ± 0.653). The Mann–Whitney U Test indicated that dark chocolate was significantly more effective than carrot juice in reducing menstrual pain ($Z = -3.799$; $p < 0.001$).

Conclusion: Both dark chocolate and carrot juice effectively reduced menstrual pain; however, dark chocolate demonstrated greater effectiveness than carrot juice among female Midwifery students at Poltekkes Kemenkes Yogyakarta.

Keywords: Dark Chocolate, Carrot Juice, Dysmenorrhea