HUBUNGAN JENIS, DOSIS, DAN FREKUENSI PENGGUNAAN ERGOGENIC AIDS TERHADAP MASSA OTOT PADA ATLET WEIGHT
SPORT NON- COMBAT DI DAERAH ISTIMEWA YOGYAKARTA
Nabila Nasywa Larasati Rinda Kusumaningrum, Dr. Mirza Hapsari STP., S.Gz., Dietisien, MPH; Dr. dr. Rahmaningsih
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HUBUNGAN JENIS, DOSIS DAN FREKUENSI PENGGUNAAN *ERGOGENIC AIDS* TERHADAP MASSA OTOT PADA ATLET *WEIGHT SPORT NON-COMBAT* DI DAERAH ISTIMEWA YOGYAKARTA

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INTISARI

Latar Belakang: Penggunaan *ergogenic aids* pada atlet *weight sport non-combat* semakin meningkat, namun data empiris mengenai hubungannya dengan massa otot di Indonesia, khususnya di Daerah Istimewa Yogyakarta (DIY) masih sangat terbatas. Massa otot merupakan salah satu komponen penting yang mendukung performa pada cabang olahraga angkat besi, angkat berat, dan binaraga.

Tujuan: Mengetahui gambaran jenis, dosis, dan frekuensi penggunaan *ergogenic aids*, menganalisis perbedaan massa otot berdasarkan jenis *ergogenic aids*, serta menganalisis hubungan dosis dan frekuensi penggunaan ergogenic aids dengan massa otot pada atlet *weight sport non-combat* di DIY.

Metode: Penelitian observasional dengan desain *cross-sectional* menggunakan teknik *purposive sampling*. Data penggunaan *ergogenic aids* (jenis, dosis, frekuensi) dikumpulkan melalui *Semi-Quantitative Food Frequency Questionnaire* (SQ-FFQ), sedangkan massa otot diukur menggunakan *Bioelectrical Impedance Analysis* (BIA) Omron. Analisis data menggunakan uji *Mann-Whitney*, korelasi *Spearman Rank*, dan regresi linear berganda untuk mengendalikan variabel perancu berupa jenis kelamin, usia, asupan makan, serta durasi latihan.

Hasil: Dari 51 atlet (74,5% laki-laki; 25,5% perempuan), protein whey merupakan *ergogenic aids* yang paling banyak dikonsumsi. Uji *Mann-Whitney* menunjukkan tidak terdapat perbedaan massa otot yang signifikan berdasarkan jenis ergogenic aids. Uji korelasi *Spearman Rank* menunjukkan tidak terdapat hubungan yang signifikan antara dosis maupun frekuensi penggunaan *ergogenic aids* dengan massa otot. Analisis multivariat menunjukkan jenis kelamin sebagai faktor dominan, diikuti usia dan dosis protein whey.

Kesimpulan: Tidak terdapat perbedaan massa otot berdasarkan jenis *ergogenic aids* maupun hubungan antara dosis dan frekuensi penggunaannya dengan massa otot pada atlet weight sport non-combat di DIY. Massa otot lebih dipengaruhi oleh jenis kelamin dan usia.

Kata kunci: Atlet; Daerah Istimewa Yogyakarta; Dosis; *Ergogenic Aids*; Frekuensi; Massa Otot; *Weight Sport Non-combat*

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THE ASSOCIATION BETWEEN TYPE, DOSAGE, AND FREQUENCY OF ERGOGENIC AIDS USE AND MUSCLE MASS AMONG NON-COMBAT WEIGHT SPORT ATHLETES IN THE SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

Background: The use of ergogenic aids among non-combat weight sport athletes continues to increase; however, empirical data on its relationship with muscle mass in Indonesia, particularly in the Special Region of Yogyakarta (DIY), remain scarce. Muscle mass is an important component supporting performance in weightlifting, powerlifting, and bodybuilding.

Objective: To describe the type, dose, and frequency of ergogenic aid use, to analyze differences in muscle mass based on ergogenic aid type, and to analyze the relationship between ergogenic aid dose and frequency with muscle mass in non-combat weight sport athletes in DIY.

Methods: An observational study with a *cross-sectional* design using *purposive sampling*. Data on ergogenic aid use (type, dose, frequency) were collected using the *Semi-Quantitative Food Frequency Questionnaire* (SQ-FFQ), while muscle mass was measured using *Bioelectrical Impedance Analysis* (BIA) Omron. Data were analyzed using the *Mann-Whitney* test, *Spearman Rank* correlation, and multiple linear regression to control for confounding variables including sex, age, dietary intake, and training duration.

Results: Among 51 athletes (74.5% male; 25.5% female), whey protein was the most frequently consumed ergogenic aid. The *Mann-Whitney* test showed no significant differences in muscle mass based on ergogenic aid type. *Spearman Rank* correlation showed no significant relationships between ergogenic aid dose or frequency and muscle mass. Multivariate analysis identified sex as the dominant factor, followed by age and whey protein dose.

Conclusion: No significant differences in muscle mass based on ergogenic aid type, nor significant relationships between ergogenic aid dose and frequency with muscle mass, were found among non-combat weight sport athletes in DIY. Muscle mass was more strongly influenced by sex and age.

Keywords: Athletes; Dose; Ergogenic Aids; Frequency; Muscle Mass; Non-Combat Weight Sport; Special Region of Yogyakarta

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