

INTISARI

HUBUNGAN KOMPOSISI TUBUH DAN ASUPAN MAKAN DENGAN VO₂MAKS ATLET *ENDURANCE SPORT* DI SMA NEGERI OLAHRAGA (SMANOR) SIDOARJO SELAMA PANDEMI COVID-19

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Latar Belakang: Pandemi COVID-19 menyebabkan berbagai negara merasakan dampak negatif dalam berbagai bidang salah satunya adalah bidang olahraga. Adanya pandemi menyebabkan latihan tidak dapat dilaksanakan secara maksimal sehingga terdapat perubahan pola latihan. Perubahan pola latihan selama pandemi ini dapat berpengaruh terhadap berkurangnya massa dan kekuatan otot, berkurangnya fungsi *cardiorespiratory*, dan peningkatan massa lemak tubuh akibat dari perubahan asupan makan yang kurang pemantauan.

Tujuan Penelitian: Mengetahui hubungan komposisi tubuh dan asupan makan dengan VO₂Maks atlet *endurance* selama pandemi COVID-19.

Metode: Penelitian ini menggunakan desain *cross-sectional* dengan jumlah subjek penelitian yaitu 67 atlet pada cabang olahraga atletik, sepak takraw, dan voli pantai yang dipilih menggunakan cara *purposive sampling*. Uji statistik yang digunakan adalah korelasi *Pearson Product Moment*, *Rank Spearman*, dan regresi linier.

Hasil: Hasil penelitian menunjukkan hubungan negatif antara persentase lemak (total lemak $p < 0,001$, lemak subkutan *whole body* $p < 0,001$, *trunk* $p < 0,001$, *arms* $p < 0,001$, dan *legs* $p < 0,001$) dengan VO₂Maks. Hubungan positif antara persentase otot (otot rangka *whole body* $p < 0,001$, *trunk* $p < 0,001$, *arms* $p < 0,001$, dan *legs* $p < 0,001$) dengan VO₂Maks. Disisi lain, tidak ada hubungan antara asupan makan (energi $p = 0,412$, protein $p = 0,144$, lemak = 0,235, karbohidrat = 0,443) dengan VO₂Maks.

Kesimpulan: Nilai VO₂maks atlet *endurance* tidak berhubungan dengan asupan makan, tetapi berhubungan dengan komposisi tubuh. Atlet dengan persentase lemak yang besar memiliki nilai VO₂maks yang kecil, sedangkan atlet dengan persentase otot yang besar memiliki nilai VO₂max yang besar.

Kata Kunci: Persentase lemak, persentase otot, asupan makan, VO₂Maks.

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ABSTRACT

THE RELATIONSHIP BETWEEN BODY COMPOSITION AND FOOD INTAKE WITH VO₂MAX OF ENDURANCE SPORT ATHLETES IN SIDOARJO STATE SCHOOL OF SPORTS (SMANOR) DURING THE COVID-19 PANDEMIC

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Background: The COVID-19 pandemic has caused various countries to get negative impacts in various fields, one of which is sports. The pandemic causes exercises cannot be implemented optimally so that there are changes in exercise patterns. Changes in exercise patterns during this pandemic can affect reduced muscle mass and strength, reduced cardiorespiratory function, and increased body fat mass due to changes in food intake that are less monitored.

Objective: To determine the relationship between body composition and food intake with VO₂max endurance athletes during the COVID-19 pandemic.

Methods: This study used a cross-sectional design with the number of research subjects are 67 athletes in athletics, sepak takraw, and beach volleyball selected using purposive sampling. The statistical test used are Pearson Product moment correlation, Spearman Rank, and linear regression.

Results: The results showed a negative relationship between the percentage of fat (total fat $p < 0,001$, subcutaneous fat whole body $p < 0,001$, trunk $p < 0,001$, arms $p < 0,001$, and legs $p < 0,001$) and VO₂max. Positive relationship between the percentage of muscle (skeletal muscle whole body $p < 0,001$, trunk $p < 0,001$, arms $p < 0,001$, and legs $p < 0,001$) and VO₂max. On the other hand, there was no relationship between food intake (energy $p = 0.412$, protein $p = 0.144$, fat = 0.235, carbohydrates = 0.443) and VO₂max.

Conclusion: The VO₂max value of endurance athletes is not related to food intake, but it is related to body composition. Athletes with a large percentage of body fat have a small value of VO₂max, while athletes with a large percentage of muscle have a large value of VO₂max.

Keywords: Fat percentage, muscle percentage, food intake, VO₂max.

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