

PERBEDAAN DAN PEMETAAN SKINFOLD DAN SOMATOTYPE PADA ATLET REMAJA BERBAGAI CABANG OLAHRAGA KATEGORI COMBAT SPORT INTISARI

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Latar Belakang: Setiap cabang olahraga memiliki perbedaan karakteristik yang penting untuk mengelompokkan atlet potensial untuk dibina seperti tipe dan komposisi tubuh. Tipe dan komposisi tubuh berhubungan dengan lemak tubuh, dimana lemak tubuh dipengaruhi oleh asupan. Namun, hubungan asupan dengan *skinfold* dan *somatotype* masih rancu. **Tujuan:** Mengetahui perbedaan nilai *skinfold* dan *somatotype* atlet remaja *combat sport*; mengetahui hubungan asupan dengan *skinfold* dan *somatotype* atlet remaja *combat sport*. **Metode:** Penelitian *cross-sectional* dilakukan di SMANOR Sidoarjo dan PJSI DIY pada Februari-Maret 2024 dengan total responden 45 atlet judo, karate, pencak silat, dan taekwondo berusia 10-18 tahun. Data nilai *skinfold* dan *somatotype* didapatkan dengan pengukuran antropometri. Data asupan didapatkan dengan SQ-FFQ. Uji perbedaan dengan ANOVA atau Kruskal-Wallis. Uji hubungan dengan uji Pearson atau Spearman. **Hasil:** Hasil uji beda *skinfold* trisep atlet judo dengan karate laki-laki; *skinfold* trisep atlet judo perempuan dengan karate dan pencak silat; *skinfold* subskapula, nilai *endomorphy* dan *ectomorphy* atlet taekwondo perempuan dengan karate dan pencak silat; serta nilai *endomorphy* atlet judo perempuan dengan pencak silat bernilai $p < 0,05$. Nilai *somatotype* atlet judo lebih condong ke arah *endomorphy* dan *mesomorphy*, sedangkan atlet taekwondo berimbang pada ketiganya, begitu pula dengan referensi. Hasil uji korelasi asupan energi dan karbohidrat dengan nilai *mesomorphy* mendapatkan hasil $p < 0,05$ dengan korelasi positif. **Kesimpulan:** Atlet judo seluruhnya memiliki nilai *skinfold* trisep yang lebih rendah daripada atlet karate dan pencak silat. Atlet taekwondo perempuan memiliki nilai *skinfold* subskapula yang lebih rendah daripada atlet karate dan pencak silat, sedangkan pada nilai *ectomorphy*-nya atlet taekwondo memiliki nilai yang lebih tinggi daripada keduanya. Atlet pencak silat perempuan memiliki nilai *endomorphy* yang lebih tinggi dari atlet judo dan taekwondo, serta atlet karate perempuan memiliki nilai yang lebih tinggi daripada atlet taekwondo. Pemetaan *somatotype* atlet judo dan taekwondo secara keseluruhan sudah mendekati referensi. Terdapat hubungan antara asupan energi dan lemak dengan nilai *mesomorphy*. Semakin tinggi asupan energi dan lemak maka nilai *mesomorphy* juga akan semakin tinggi.

Kata Kunci: asupan makan, atlet remaja, *combat sport*, *skinfold*, *somatotype*

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THE DIFFERENCES AND PLOTTING OF SKINFOLD AND SOMATOTYPE IN ADOLESCENT ATHLETES VARIOUS SPORT IN THE COMBAT SPORT CATEGORY ABSTRACT

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Background: Each sport has different characteristics that are substantial to classifying potential athletes that will be coached, such as body types and compositions. Body fat and compositions are related to body fat, which is affected by intake. However, the correlation between intake with skinfold and somatotype remains ambiguous. **Objective:** To identify the difference in skinfold and somatotype of adolescent combat sports athletes; and to determine the correlation between intake with skinfold and somatotype of adolescent combat sports athletes.

Method: The cross-sectional study was conducted at SMANOR Sidoarjo and PJSI DIY in February-March 2024 with a total of 45 judo, karate, pencak silat, and taekwondo athletes aged 10-18 years as respondents. Data on skinfold and somatotype were obtained by anthropometric measurements. Food intake data were obtained with SQ-FFQ. The difference test is carried out using ANOVA or Kruskal-Wallis. The correlation test is applied using Pearson or Spearman test.

Results: The result of the difference test in triceps skinfold of male judo athletes with karate athletes; triceps skinfold of female judo athletes with karate and pencak silat; subscapular skinfold, endomorphy and ectomorphy values of female taekwondo athletes with karate and pencak silat; and endomorphy score of female judo athlete with pencak silat obtained $p < 0.05$. The somatotype of judo athletes leads towards endomorphy and mesomorphy, while taekwondo athletes are balanced in all three, likewise the reference. The result of the correlation test between energy and carbohydrate intake with mesomorphy score obtained $p < 0.05$ with a positive correlation. **Conclusion:** All judo athletes have lower triceps skinfold than karate and pencak silat athletes. Female taekwondo athletes have lower subscapular skinfold than karate and pencak silat athletes, whereas the ectomorphy value of taekwondo athletes have higher scores than both. Female pencak silat athletes have higher endomorphy scores than judo and taekwondo athletes, and female karate athletes have higher scores than taekwondo athletes. Plotting somatotypes of judo and taekwondo athletes are close to the reference. There is a significant relationship between energy and fat intake with mesomorphy scores. The higher energy and fat intake, the value of mesomorphy will also get higher.

Keyword: adolescent athletes, combat sport, dietary intake, skinfold, somatotype

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