

ABSTRAK

ANALISIS PERBEDAAN PENGELUARAN ENERGI TOTAL DENGAN ASUPAN ENERGI DAN PROTEIN SAAT HARI LATIHAN PADA ATLET SEPAK BOLA USIA 9-12 TAHUN

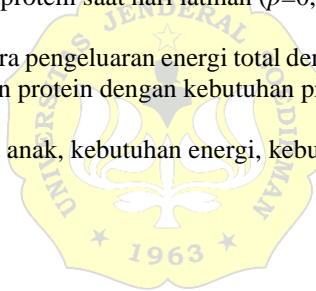
Latar Belakang: Atlet anak memerlukan asupan energi dan protein untuk mendukung pertumbuhan dan perkembangan, serta mencapai performa optimal. Penelitian ini bertujuan mengetahui perbedaan antara pengeluaran energi saat hari latihan dengan asupan energi, serta kebutuhan protein dengan asupan protein pada atlet sepak bola usia 9-12 tahun.

Metode: Penelitian ini menggunakan desain *cross-sectional*. Sampel penelitian terdiri atas 22 atlet sepak bola usia 9-12 tahun. Rata-rata asupan energi dan protein diperoleh melalui *food recall* 2x24 jam dengan bantuan foto makanan. Pengeluaran energi total pada atlet dihitung menggunakan rumus BMR (Schofield), TEF, dan PAL (kuesioner aktivitas fisik). Kebutuhan protein 1,7 g/kgBB/hari. Analisis bivariat menggunakan Wilcoxon dan uji T berpasangan.

Hasil: Rata-rata pengeluaran energi total saat hari latihan (2.440,54±302,29 kkal) lebih tinggi dari rata-rata asupan energi (1.783±416,46 kkal). Ada perbedaan antara pengeluaran energi total hari latihan dengan asupan energi ($p=0,000$). Kebutuhan protein pada atlet pemula 55,42 (43,86 – 85) g/hari, sedangkan rata-rata asupan proteinnya 63,08±13,29 g/hari. Tidak terdapat perbedaan antara asupan protein dengan kebutuhan protein saat hari latihan ($p=0,306$).

Kesimpulan: Ada perbedaan antara pengeluaran energi total dengan asupan energi saat hari latihan. Tidak ada perbedaan antara asupan protein dengan kebutuhan protein saat hari latihan.

Kata Kunci: asupan protein, atlet anak, kebutuhan energi, kebutuhan protein, pengeluaran energi



ABSTRACT

ANALYSIS OF DIFFERENCE BETWEEN TOTAL ENERGY EXPENDITURE AND ENERGY AND PROTEIN INTAKE DURING TRAINING DAYS IN FOOTBALL ATHLETES AGED 9-12 YEARS

Background: Child athletes require energy and protein intake to support growth and development, and achieve optimal performance. This study aims to determine the difference between energy expenditure during training days and energy intake, as well as protein requirements and protein intake during training days in athletes aged 9-12 years.

Method: This study used a cross-sectional design. The study sample consisted of 22 athletes aged 9-12 years. The average energy and protein intake were obtained through 2x24-hour food recalls and food photos. Energy expenditure in athletes was calculated using formula BMR (Schofield), TEF, and PAL (physical activity questionnaire). Protein requirements were calculated at 1.7 g/kgBW/day. Bivariate analysis using Wilcoxon and paired T-test.

Results: The average total energy expenditure during training days ($2,440.54 \pm 302.29$ kcal) was higher than the average energy intake ($1,783 \pm 416.46$ kcal). There was a difference between total energy expenditure during training days and energy intake ($p=0.000$). Protein requirements for athletes were 55.42 ($43.86-85$) g/day, while the average protein intake was 63.08 ± 13.29 g/day. There was no difference between protein intake and protein requirements during training days ($p=0.306$).

Conclusion: There was a difference between total energy expenditure and energy intake during training days. There was no difference between protein intake and protein requirements during training days.

Keywords: child athletes, energy expenditure, energy requirements, protein intake, protein requirements

