

ABSTRAK

Septian, Denny. 2015. Hubungan Konsumsi Makanan Sumber Kalsium (Ca) dan Makanan Sumber Magnesium (Mg) dengan Kebugaran (VO_2max) Atlet Bulutangkis di SMP dan SMA Negeri Olahragawan Ragunan Jakarta Selatan. Tugas Akhir, Program Studi Ilmu Gizi Fakultas Kedokteran Universitas Brawijaya. Pembimbing: (1) DR.dr. Endang Sri Wahyuni, MS, (2) Catur Saptaning Wilujeng, S.Gz, MPH.

Kebugaran Jasmani (VO_2max) merupakan volume maksimal oksigen pada saat melakukan kegiatan intensif yang biasanya digunakan untuk mengukur daya tahan atlet suatu cabang olahraga. Kebugaran tubuh yang optimal sangat dibutuhkan oleh seorang atlet bulutangkis. Asupan makanan dapat mempengaruhi seseorang untuk mencapai dan mempertahankan kebugaran jasmani dan kesehatan, namun bagi banyak anak-anak dan remaja usia sekolah terjadi kekurangan asupan seperti kalsium dan magnesium yang dapat mempengaruhi pertumbuhan, kesehatan, dan kinerja fisik atlet. Penelitian ini bertujuan untuk Mengetahui hubungan konsumsi makanan sumber Kalsium (Ca) dan makanan sumber Magnesium (Mg) dengan kebugaran (VO_2max) atlet bulutangkis di SMP dan SMA Negeri Olahragawan Ragunan Jakarta Selatan. Rancangan penelitian menggunakan *cross sectional*, sampel dipilih dengan cara *total sampling*, dengan jumlah sebanyak 21 orang. Variabel yang diukur yaitu konsumsi makanan sumber kalsium, konsumsi makanan sumber magnesium menggunakan form SQ-FFQ dan kebugaran jasmani (VO_2max). Hasil penelitian menunjukkan rata-rata asupan kalsium atlet yaitu sebesar 908,92 mg/hr, dan rata-rata asupan magnesium sebesar 345,14 mg/hr, serta rata-rata VO_2max sebesar 48,27 mm/menit/kg berat badan. Analisis hubungan konsumsi makanan sumber kalsium dengan kebugaran jasmani (VO_2max) menggunakan uji korelasi *spearman* diperoleh $p= 0,000 (<0,05)$. Analisis hubungan konsumsi makanan sumber Magnesium dengan kebugaran jasmani (VO_2max) menggunakan uji korelasi *spearman* diperoleh $p= 0,008 (<0,05)$. Kesimpulan dari penelitian ini adalah konsumsi makanan sumber kalsium dan magnesium berhubungan dengan kebugaran jasmani (VO_2max) pada atlet usia sekolah. Berdasarkan penelitian ini, disarankan agar atlet diberikan edukasi dan atlet dapat melakukan pengaturan pola makan untuk mencapai diet yang optimal.

Kata kunci: Kalsium (Ca), Magnesium (Mg), Kebugaran Jasmani (VO_2max)

ABSTRACT

Septian, Denny. 2015. The Correlation between the Consumption of Calcium's Foods (Ca) and Magnesium's Foods (Mg) with the Physical Fitness (VO_2max) of Badminton Athlete at Junior High School and Senior High School of Athlete in Ragunan South Jakarta. The final report, Nutritional Program, Faculty of Medicine, Brawijaya University. Advisor: (1) DR.dr. Endang Sri Wahyuni, MS, (2) Catur Saptaning Wilujeng, S.Gz , MPH.

The physical fitness is a maximum oxygen capacity when doing an intensive activity that sometimes used to measure the endurance of athletes in some branch of sports. The optimal physical fitness is needed by badminton athlete. The food intake is influencing to reach the physical fitness and health of person, but for most teenager who less intake of foods like calcium and magnesium can influence the growth, health, and performance of the athlete. This research is aim to determining the correlation between the consumption of calcium's foods (Ca) and the consumption of magnesium's foods (Mg) with the physical fitness (VO_2max) of badminton athlete at Junior High School and Senior High School of Athlete in Ragunan South Jakarta. The research design is using a cross sectional, selected sample by using total sampling, by involving 21 people. The variable that measured is the consumption of calcium's foods, the consumption of magnesium's foods by using a form of SQ-FFQ and physical fitness (VO_2max). The result of this research is showing the average calcium intake of athlete is 908,92 mg/hr, and the average magnesium intake is 345,14 mg/hr, and the average of VO_2max is 48,27 mm/minute/kg of the weight. The correlation analysis consumption of calcium's foods with the physical fitness (VO_2max) is using the *spearman* correlation test obtained $p=0,000 (<0,05)$, and the correlation analysis of magnesium's foods consumption with the physical fitness (VO_2max) is using the *spearman* correlation test obtained $p=0,008 (<0,05)$. The conclusion of this research is the consumption of calcium's and magnesium's foods is having a correlation with the physical fitness (VO_2max) for athlete in their school time. Based on this research, the athletes are suggested to be given an education and in order to achieve an optimal dietary habit.

Key Words: Calcium (Ca), Magnesium (Mg), Physical Fitness (VO_2max)