

ABSTRAK

Citra Ayu Lestari Barus. 5173240010. “*Hubungan Asupan Karbohidrat dan Serat dengan Kadar Glukosa Darah Pada Penderita Diabetes Melitus Tipe 2 Di Desa Sigara-gara Kec. Patumbak, Kab. Deli Serdang*”. Pendidikan Kesejahteraan Keluarga. Gizi . Fakultas Teknik. Universitas Negeri Medan. 2022.

Penelitian ini bertujuan untuk mengetahui : (1) Karakteristik Responden; (2) Asupan karbohidrat pada penderita Diabetes Melitus Tipe 2; (3) Asupan serat pada penderita Diabetes Melitus Tipe 2; (4) Kadar Glukosa Darah Pada Penderita Diabetes Melitus Tipe 2; (5) Hubungan asupan karbohidrat dengan kadar glukosa darah pada penderita Diabetes Melitus Tipe 2; (6) Hubungan asupan serat dengan kadar glukosa darah pada penderita Diabetes Melitus Tipe 2; (7) Hubungan asupan karbohidrat dan serat dengan kadar glukosa darah pada penderita Diabetes Melitus Tipe. Penelitian dilaksanakan di Desa Sigara-gara Kec. Patumbak, Kab. Deli Serdang. Teknik pengambilan sampel secara *Simple Random Sampling* dengan jumlah sampel 41 Responden Penderita Diabetes Melitus Tipe 2. Teknik pengumpulan data menggunakan formulir *Food Recall 24*, *SQ-FFQ*, dan formulir kadar glukosa darah puasa (GDP). Teknik analisis data menggunakan Deskripsi Data, Uji *Rank Spearman* dan Uji Regresi Linier berganda.

Hasil penelitian ini menunjukkan karakteristik responden yaitu usia termasuk kategori lansia akhir dengan rerata 52 tahun. Jenis kelamin terbanyak yaitu perempuan. IMT termasuk kategori obesitas I dengan rerata 25,87. Pendidikan termasuk kategori SMP-SMA dengan rerata 12 tahun. Jenis pekerjaan yaitu wiraswasta. Pendapatan termasuk kategori rendah dengan rerata Rp. 2.149.024. Besaran keluarga termasuk kategori kecil dengan rerata 4 orang. Asupan karbohidrat termasuk kategori asupan lebih dengan rerata 72%. Asupan serat termasuk kategori asupan kurang dengan rerata 15,72 g. Kadar glukosa darah termasuk kategori kadar glukosa darah tinggi dengan rerata 264,11 mg/dl. Hasil Uji Korelasi *Rank Spearman* terdapat hubungan yang positif dan signifikan antara asupan karbohidrat dengan kadar glukosa darah, diperoleh nilai korelasi yaitu $\rho = 0,62$ dengan $p\text{-value} = 0,000$. Artinya semakin tinggi asupan karbohidrat maka semakin tinggi kadar glukosa darah penderita Diabetes Melitus Tipe 2. Hasil Uji Korelasi *Rank Spearman* terdapat hubungan yang negatif dan signifikan antara asupan serat dengan kadar glukosa darah diperoleh nilai korelasi yaitu $\rho = - 0,44$ dengan dengan $p\text{-value} = 0,003$. Artinya semakin rendah asupan serat maka semakin tinggi kadar glukosa darah penderita Diabetes Melitus Tipe 2. Hasil Regresi Linier Berganda terdapat hubungan yang positif dan signifikan antara asupan karbohidrat dan serat dengan kadar glukosa darah yang bernilai korelasi $R_{y \times x_1 \times x_2} = 0,72$ dengan persamaan regresi $Y = 92,68 + 0,98 X_1 - 10,25 X_2$ dan nilai $R\text{ Square}$ yaitu 52,43 % dengan dengan $p\text{-value} = 0,000$. Artinya 52,43% variabel glukosa darah dijelaskan oleh variabel asupan karbohidrat dan serat.

ABSTRACT

Citra Ayu Lestari Barus. 5173240010. *“The Relationship Between Carbohydrate and Dietary Fiber Intake on Blood Glucose Levels with Type 2 Diabetes Mellitus In Sigara-gara Village, Patumbak District, Deli Serdang Regency. Family Welfare Education. Nutrition. Faculty of Engineering. State University of Medan. 2021.*

This research aims to determine: (1) Results of carbohydrate intake in patients with Type 2 Diabetes Mellitus; (2) Results of fiber intake in patients with Type 2 Diabetes Mellitus; (3) Results of Blood Glucose Levels in Patients with Type 2 Diabetes Mellitus; (4) The relationship between carbohydrate intake and blood glucose levels in patients with Type 2 Diabetes Mellitus; (5) The relationship between fiber intake and blood glucose levels in patients with Type 2 Diabetes Mellitus; (6) The relationship between carbohydrate and fiber intake with blood glucose levels in patients with Type 2 Diabetes Mellitus. The research was carried out in Sigara-gara Village, Patumbak District, Deli Serdang Regency. The sampling technique was simple random sampling with a total sample of 41 respondents with type 2 Diabetes Mellitus. Data collection techniques used 24-Hours Food Recall Form, SQ-FFQ form, and blood glucose levels form. The data analysis technique used data description, Hypothesis test with Rank Spearman Correlation Test and Multiple Linear Regression Test.

The study results show that age respondents with a mean of 52 years. Based on the most common gender was female. Based on BMI was obesity class I with a mean of 25.87. Based on the most common education was junior-high school. Based on the most common work was self-employed. Based on the most common income was included in the low category with a mean of Rp. 2,149,024. Based on the most common family size belongs to the small category with a mean of 4 people. Carbohydrate intake was included in the more intake category with a mean of 72%. Fiber intake is included in the category of low intake with a mean of 15.72 g. Blood glucose levels are categorized as high blood glucose levels with a mean of 264.11 mg/dl. The results of the Spearman Rank correlation have a positive and significant relationship between carbohydrate intake and blood glucose levels, the correlation value is = 0.62 with a p-value = 0.000. This means that the higher the intake of carbohydrates, the higher the blood glucose levels of people with Type 2 Diabetes Mellitus. The results of the Spearman Rank correlation have a negative and significant relationship between fiber intake and blood glucose levels, the correlation value is = - 0.44 with a p-value = 0.003. This means that the lower the fiber intake, the higher the blood glucose levels of people with Type 2 Diabetes Mellitus. The results of Multiple Linear Regression have a positive and significant relationship between carbohydrate and fiber intake and blood glucose levels with a correlation value of $R_{yx1x2} = 0.72$ with the regression equation $Y = 92.68 + 0.98 X_1 - 10.25 X_2$ and the value of R Square is 52.43% with a p-value = 0.000. This means that 52.43% of blood glucose variables are explained by the variables of carbohydrate and fiber intake.