

Universitas Ngudi Waluyo  
Program Studi S1 Gizi, Fakultas Kesehatan  
Skripsi, Juli 2025  
Nila Mely Viana  
067241010

## HUBUNGAN ASUPAN KARBOHIDRAT SEDERHANA DAN SERAT DENGAN KADAR GLUKOSA DARAH SEWAKTU PASIEN DIABETES MELLITUS DI BANGSAL RAWAT INAP RSUD dr. GONDO SUWARNO UNGARAN

### ABSTRAK

**Latar Belakang:** Diabetes mellitus merupakan penyakit metabolik kronis yang ditandai dengan meningkatnya kadar glukosa darah akibat gangguan metabolisme insulin. Asupan karbohidrat sederhana dan serat merupakan komponen diet yang berperan dalam mengontrol kadar glukosa darah pada pasien diabetes. Penelitian ini bertujuan untuk mengetahui hubungan antara asupan karbohidrat sederhana dan serat dengan kadar glukosa darah sewaktu (GDS) pasien diabetes mellitus di bangsal rawat inap RSUD dr. Gondo Suwarno Ungaran.

**Metode:** Penelitian ini menggunakan desain observasional analitik dengan pendekatan *cross-sectional*. Sampel penelitian berjumlah 39 pasien diabetes mellitus yang dipilih dengan teknik total sampling. Data asupan karbohidrat sederhana dan serat diperoleh melalui wawancara menggunakan *recall 1x24* jam dan dianalisis dengan perangkat lunak *NutriSurvey*, sedangkan kadar GDS diambil dari rekam medis. Analisis hubungan antar variabel menggunakan *uji Kendall's tau-b* ( $\alpha : 0,05$ )

**Hasil:** Asupan karbohidrat sederhana responden terbanyak berada pada kategori tinggi (71,8%), kategori rendah (20,5%) dan cukup (7,7%). Asupan serat sebagian besar rendah (82,1%) dan hanya 17,9% yang cukup. Kadar GDS menunjukkan 43,6% responden berada pada kategori terkontrol, 38,5% hiperglikemia, dan 17,9% hipoglikemia. Uji bivariat menunjukkan tidak terdapat hubungan bermakna antara asupan karbohidrat sederhana ( $p=0,677$ ) maupun serat ( $p=0,796$ ) dengan kadar GDS pasien diabetes mellitus.

**Kesimpulan:** Penelitian ini menunjukkan tidak ada hubungan signifikan antara asupan karbohidrat sederhana dan serat dengan kadar glukosa darah sewaktu pada pasien diabetes mellitus rawat inap. Faktor-faktor lain seperti terapi obat, aktivitas fisik, dan komorbiditas kemungkinan berperan dalam pengendalian glukosa darah.

**Kata Kunci:** diabetes mellitus, kadar glukosa darah sewaktu, karbohidrat sederhana, serat

Universitas Ngudi Waluyo  
Program Studi S1 Gizi, Fakultas Kesehatan  
Skripsi, Juli 2025  
Nila Mely Viana  
067241010

**THE RELATIONSHIP BETWEEN SIMPLE CARBOHYDRATE AND FIBER  
INTAKE AND RANDOM BLOOD GLUCOSE LEVELS IN DIABETES MELLITUS  
PATIENTS IN THE INPATIENT WARD OF RSUD dr. GONDO SUWARNO  
UNGARAN**

**ABSTRACT**

**Background :** Diabetes mellitus is a chronic metabolic disease characterized by elevated blood glucose levels due to impaired insulin metabolism. Simple carbohydrates and dietary fiber are key dietary components that play a role in controlling blood glucose levels. This study aimed to determine the relationship between simple carbohydrate and fiber intake with random blood glucose (RBG) levels among hospitalized patients with diabetes mellitus at RSUD dr. Gondo Suwarno Ungaran.

**Methods :** This study employed an observational analytic design with a *cross-sectional* approach. A total of 39 patients with diabetes mellitus were recruited using total sampling. Data on simple carbohydrate and fiber intake were collected through interviews using a *24-hour dietary recall* and analyzed with *NutriSurvey* software, while RBG levels were obtained from medical records. The association between variables was analyzed using the *Kendall's tau-b* test ( $\alpha : 0,05$ )

**Results :** The majority of respondents had high simple carbohydrate intake (71.8%), followed by low (20.5%) and adequate intake (7.7%). Fiber intake was predominantly low (82.1%), with only 17.9% categorized as adequate. RBG levels showed that 43.6% of respondents were in the controlled category, 38.5% in hyperglycemia, and 17.9% in hypoglycemia. Bivariate analysis revealed no significant association between simple carbohydrate intake ( $p=0.677$ ) or fiber intake ( $p=0.796$ ) and RBG levels among patients with diabetes mellitus.

**Conclusion:** This study indicates that there is no significant relationship between simple carbohydrate and fiber intake with random blood glucose levels in hospitalized patients with diabetes mellitus. Other factors such as medication therapy, physical activity, and comorbidities may contribute to blood glucose regulation.

**Keywords:** diabetes mellitus, random blood glucose, simple carbohydrate, fiber