

**DETERMINASI GAYA HIDUP DAN STATUS KESEHATAN TERHADAP
KADAR GLUKSOSA DARAH PADA PASIEN DIABETES MELITUS TIPE 2
(Studi pada Pasien Rawat Jalan di Poli Penyakit Dalam RSAU dr. M. Salamun)**



SKRIPSI

Diajukan untuk memenuhi Sebagian syarat untuk memperoleh gelar Sarjana Gizi

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**PROGRAM STUDI GIZI
FAKULTAS PENDIDIKAN OLAH RAGA DAN KESEHATAN
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2025
BANDUNG**

**Determinasi Gaya Hidup dan Status Kesehatan Terhadap Kadar
Glukosa Darah pada Pasien Diabetes Melitus Tipe 2
(Studi pada Pasien Rawat Jalan di Poli Penyakit Dalam RSAU dr. M.
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Sarjana Gizi pada Fakultas Pendidikan Olahraga dan Kesehatan

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ABSTRAK

DETERMINASI GAYA HIDUP DAN STATUS KESEHATAN TERHADAP KADAR GLUKOSA DARAH PADA PASIEN DIABETES MELITUS TIPE 2 (Studi pada Pasien Rawat Jalan di Poli Penyakit Dalam RSAU dr. M. Salamun)

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Latar Belakang: Diabetes melitus tipe 2 merupakan penyakit metabolik kronis dengan prevalensi yang terus meningkat dan dipengaruhi oleh berbagai faktor seperti status gizi, pola makan, serta tingkat aktivitas fisik. **Tujuan:** Menganalisis hubungan antara tekanan darah, aktivitas fisik, asupan zat gizi makro frekuensi konsumsi UPF, dan status gizi dengan kadar gula darah pada pasien diabetes melitus tipe 2. **Metode:** Desain penelitian ini adalah *cross-sectional* dengan *total sampling* sebanyak 50 pasien rawat jalan diabetes melitus tipe 2 di Poli Penyakit Dalam RSAU dr. M. Salamun Bandung. Data primer diperoleh melalui wawancara menggunakan FFQ berbasis klasifikasi NOVA dan divalidasi dengan *Food Recall* 1×24 jam, serta IPAQ-LF. Data sekunder meliputi rekam medis untuk GDP, tekanan darah tinggi dan berat badan. Analisis bivariat yang digunakan adalah uji korelasi *Spearman Rho*. **Hasil:** Ditemukan hubungan negatif bermakna antara asupan karbohidrat ($p=0,045$) < kecukupan energi ($p=0,049$), dan tingkat aktivitas fisik ($p=0,015$) dengan kadar GDP. Tekanan darah sistolik dan diastolik menunjukkan korelasi positif lemah terhadap kadar GDP ($p=0,006$; $p=0,013$). Tidak ditemukan hubungan signifikan antara frekuensi konsumsi UPF ($p=0,501$) dan IMT ($p=0,966$) dengan kadar GDP. **Kesimpulan:** Hasil penelitian menunjukkan bahwa tekanan darah, asupan karbohidrat, kecukupan energi, dan tingkat aktivitas fisik memiliki hubungan signifikan dengan kadar glukosa darah puasa pada pasien diabetes melitus tipe 2. Sementara itu, frekuensi konsumsi UPF dan status gizi tidak menunjukkan hubungan yang signifikan. Temuan ini menekankan pentingnya pengelolaan gaya hidup dan status kesehatan dalam pengendalian glukosa darah.

Kata kunci: aktivitas fisik, diabetes melitus tipe 2, status gizi, tekanan darah, *ultra-processed foods*

ABSTRACT

THE EFFECT OF LIFESTYLE AND HEATH STATUS ON BLOOD GLUCOSE LEVELS IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

**(Study on Outpatients in Internal Medicine Polyclinic of RSAU. dr. M.
Salamun)**

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Background: Type 2 diabetes mellitus is a chronic metabolic disease with increasing prevalence and is influenced by various factors such as nutritional status, diet and physical activity levels. **Objective:** To analyze the relationship between blood pressure, physical activity, macronutrient intake, frequency of UPF consumption, and nutritional status on blood sugar levels in type 2 diabetes mellitus patients. **Methods:** This study design was cross-sectional with a total sampling of 50 outpatients with type 2 diabetes mellitus at RSAU dr. M. Salamun Bandung. Primary data were obtained through interviews using FFQ based on NOVA classification and validated with 1 × 24-hour Food Recall, and IPAQ-LF. Secondary data included medical records for FBG, blood pressure, body high and weight. The bivariate analysis used was the Spearman Rho correlation test. **Results:** This study found that systolic and diastolic blood pressure were weakly positively correlated with FBG ($p=0,006$; $p=0,013$). Carbohydrate intake ($p=0,045$), energi adequacy ($p=0,049$), and physical activity level ($p=0,015$) had weak-moderate negative correlations with FBG levels. UPF frequency and nutritional status were not significantly related ($p=0,501$; $p=0,966$) to FBG levels. **Conclusion:** The resluts showed that blood pressure, carbohydrate intake, energi adequacy, and physical activity levels were significantly associated with fasting blood glucse levels in patients with type 2 diabetes mellitus. Meanwhile, the frequency of UPF consumption and nutritional status did not show a significant relationship. These findings emphasize the importance of lifestyle management and health status in blood control.

Keywords: blood pressure, nutritional status, physical activity, type 2 diabetes mellitus, ultra-processed foods

DAFTAR ISI

PERNYATAAN BEBAS PLAGIARISME	i
KATA PENGANTAR.....	ii
ABSTRAK.....	iv
<i>ABSTRACT</i>	v
DAFTAR ISI	vi
DAFTAR TABEL	viii
DAFTAR GAMBAR	ix
DAFTAR SINGKATAN	x
DAFTAR LAMPIRAN	xi
BAB I PENDAHULUAN.....	1
1.1 Latar Belakang.....	1
1.2 Rumusan Masalah.....	3
1.3 Tujuan Penelitian	3
1.3.1 Tujuan Umum.....	3
1.3.2 Tujuan Khusus.....	3
1.4 Manfaat Penelitian.....	3
1.4.1 Manfaat Praktis	3
1.4.2 Manfaat Teoritis	4
1.5 Ruang Lingkup Penelitian	5
BAB II TINJAUAN PUSTAKA	6
2.1 Diabetes Melitus	6
2.1.1 Definisi Diabetes Melitus.....	6
2.1.2 Klasifikasi Diabetes Melitus	6
2.1.3 Faktor Risiko Diabetes Melitus.....	7
2.1.4 Patofisiologi Diabetes Melitus Tipe 2	10
2.1.5 Gejala Diabetes Melitus Tipe 2	14
2.1.6 Diagnosis Diabetes Melitus Tipe 2.....	16
2.2 Aktivitas Fisik.....	17
2.2.1 Hubungan Aktivitas Fisik dengan Diabetes Melitus	18
2.3 Asupan Gizi	19
2.4 Klasifikasi NOVA.....	20
2.4.1 NOVA.....	20
2.4.2 Klasifikasi Makanan Menurut NOVA.....	20
2.4.3 Hubungan <i>Ultra-Processed Foods</i> dengan Diabetes Melitus	23
2.5 Status Gizi.....	24
2.6 Penelitian Terdahulu	25
2.7 Kerangka Teori	30
2.8 Kerangka Konsep	31
2.9 Definisi Operasional	32
2.10 Hipotesis	34
BAB III METODOLOGI PENELITIAN.....	35
3.1 Jenis Penelitian	35
3.2 Lokasi dan Waktu Penelitian	35
3.3 Populasi dan Sampel.....	35

3.3.1	Populasi	35
3.3.2	Teknik Penarikan Sampel.....	36
3.4	Teknik Pengumpulan Data.....	36
3.5	Sumber Data	36
3.4.1	Data Primer	37
3.4.2	Data Sekunder	37
3.4.3	Instrumen Penelitian.....	37
3.6	Prosedur Analisis Data.....	41
3.5.1	Pengolahan Data.....	41
3.5.2	Analisis Data	42
3.7	Isu Etik.....	43
BAB IV HASIL DAN PEMBAHASAN		45
4.1	Hasil.....	45
4.1.1	Gambaran Karakteristik Pasien.....	45
4.1.2	Gambaran Kadar Glukosa Darah Pasien.....	46
4.1.3	Gambaran Tekanan Darah Pasien.....	46
4.1.4	Gambaran Tingkat Aktivitas Fisik Pasien	46
4.1.5	Gambaran Asupan Zat Gizi Makro Pasien.....	47
4.1.6	Gambaran Frekuensi Konsumsi Makanan Berdasarkan Klasifikasi NOVA Pasien.....	48
4.1.7	Gambaran Status Gizi Pasien	49
4.1.8	Analisis Hubungan antara Tekanan Darah, Tingkat Aktivitas Fisik, Asupan Zat Gizi Makro, Frekuensi Konsumsi Makanan Berdasarkan Klasifikasi NOVA, dan Status Gizi terhadap Kadar Glukosa Darah .	50
4.2	Pembahasan	52
4.2.1	Gambaran Karakteristik Pasien.....	52
4.2.2	Hubungan Tekanan Darah terhadap Kadar Glukosa Darah	55
4.2.3	Hubungan Tingkat Aktivitas Fisik terhadap Kadar Glukosa Darah...	57
4.2.4	Hubungan Asupan Zat Gizi Makro terhadap Kadar Glukosa Darah..	59
4.2.5	Hubungan Frekuensi Konsumsi Makanan Berdasarkan Klasifikasi NOVA terhadap Kadar Glukosa Darah	62
4.2.6	Hubungan Status Gizi terhadap Kadar Glukosa Darah.....	65
BAB V KESIMPULAN DAN SARAN.....		68
5.1	Simpulan.....	68
5.2	Saran	68
DAFTAR PUSTAKA		70
LAMPIRAN.....		82

DAFTAR TABEL

Tabel 2.1 Klasifikasi Tekanan Darah	9
Tabel 2.2 Kadar Tes Laboratorium Darah untuk Diagnosis Diabetes dan Pre-Diabetes	16
Tabel 2.3 Kategori IMT.....	24
Tabel 2.4 Penelitian Terdahulu.....	25
Tabel 2.5 Definisi Operasional Variabel	32
Tabel 3.1 Coding Data Variabel	41
Tabel 4.1 Sebaran Berdasarkan Karakteristik Pasien Penelitian.....	45
Tabel 4.2 Kadar GDP Pasien Penelitian.....	46
Tabel 4.3 Tekanan Darah Pasien Penelitian	46
Tabel 4.4 Tingkat Aktivitas Fisik Pasien Penelitian.....	47
Tabel 4.5 Asupan Zat Gizi Makro Pasien Penelitian.....	47
Tabel 4.6 Kecukupan Asupan Pasien Penelitian	47
Tabel 4.7 Frekuensi Konsumsi Makanan Berdasarkan Klasifikasi NOVA Pasien Penelitian	49
Tabel 4.8 Sebaran Berdasarkan Status Gizi Pasien Penelitian	49
Tabel 4.9 Hasil Analisis Hubungan Tekanan Darah dengan Kadar GDP pada Pasien Penelitian.....	50
Tabel 4.10 Hasil Analisis Hubungan Tingkat Aktivitas Fisik dengan Kadar GDP Pasien Penelitian.....	51
Tabel 4.11 Hasil Analisis Asupan Zat Gizi Makro dengan Kadar GDP pada Pasien Penelitian.....	51
Tabel 4.12 Hasil Analisis Kecukupan Asupan Zat Gizi Makro dengan Kadar GDP	51
Tabel 4.13 Hasil Analisis Hubungan Frekuensi Konsumsi Makanan Berdasarkan Klasifikasi NOVA dengan Kadar GDP.....	52
Tabel 4.14 Hasil Analisis Hubungan Indeks Massa Tubuh dengan Kadar GDP ..	52

DAFTAR GAMBAR

Gambar 2.1 Fenotip inflamasi jaringan adiposa	12
Gambar 2.2 Alur Patofisiologi Diabetes Melitus	14
Gambar 2.3 Kerangka Teori	31
Gambar 2.4 Kerangka Konsep Penelitian	32

DAFTAR SINGKATAN

3J	: Jumlah, Jenis, dan Jadwal
AMP	: Adenosin Monofosfat
AMPK	: <i>AMP-activated Protein Kinase</i>
ATP	: Adenosin Trifosfat
BAT	: <i>Brown Adipose Tissue</i>
BTP	: Bahan Tambahan Pangan
DNA	: <i>Deoxyribonucleic Acid</i>
ESGU	: <i>Exercise-Stimulated Glucose Uptake</i>
FFQ	: <i>Food Frequency Questionnaire</i>
G6Pase	: Glukosa – 6 – Fosfat
GDM	: <i>Gestational Diabetes Mellitus</i>
GDP	: Gula Darah Puasa
GDPP	: Gula Darah Post Prandial
GLUT4	: <i>Gucose Transporter Type 4</i>
HbA1c	: <i>Hemoglobin A1c</i>
HIIT	: <i>High-Intensity Interval Training</i>
HPA	: <i>Hypothalamic-Pituitary Adrenal</i>
IL-6	: Interleukin-6
IMT	: Indeks Massa Tubuh
IPAQ-LF	: <i>Internasional Physical Activity Questionnaire – Long Form</i>
IR	: Insulin Resistance
ISGU	: <i>Insulin-Stimulated Glucose Uptake</i>
METs	: <i>Metabolic Equivalents</i>
PEPCK	: <i>Phosphoenolpyruvate Carboxykinase</i>
ROS	: <i>Reactive Oxygen Species</i>
TNF- α	: <i>Tumor Necrosis Factor Alpha</i>
UPF	: <i>Ultra-Processed Foods</i>
WAT	: <i>White Adipose Tissue</i>

DAFTAR LAMPIRAN

Lampiran 1 Riwayat Hidup Peneliti.....	83
Lampiran 2 Lembar Pengesahan Proposal Skripsi.....	84
Lampiran 3 Surat Izin Penelitian dari Kampus	85
Lampiran 4 Sertifikat Ethical Clearance	87
Lampiran 5 Instrumen Penelitian	88
Lampiran 6 Output SPSS	103
Lampiran 7 Dokumentasi.....	114
Lampiran 8 Draft Artikel Ilmiah	115
Lampiran 9 Bukti Turnitin Draft Skripsi.....	131
Lampiran 10 Bukti Turnitin Draft Artikel.....	132

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