

## HUBUNGAN KADAR GLUKOSA DARAH PUASA DAN KADAR LDL PADA PASIEN DIABETES MELITUS TIPE 2 DI PUSKESMAS 2 SUMBANG KABUPATEN BANYUMAS

### ABSTRAK

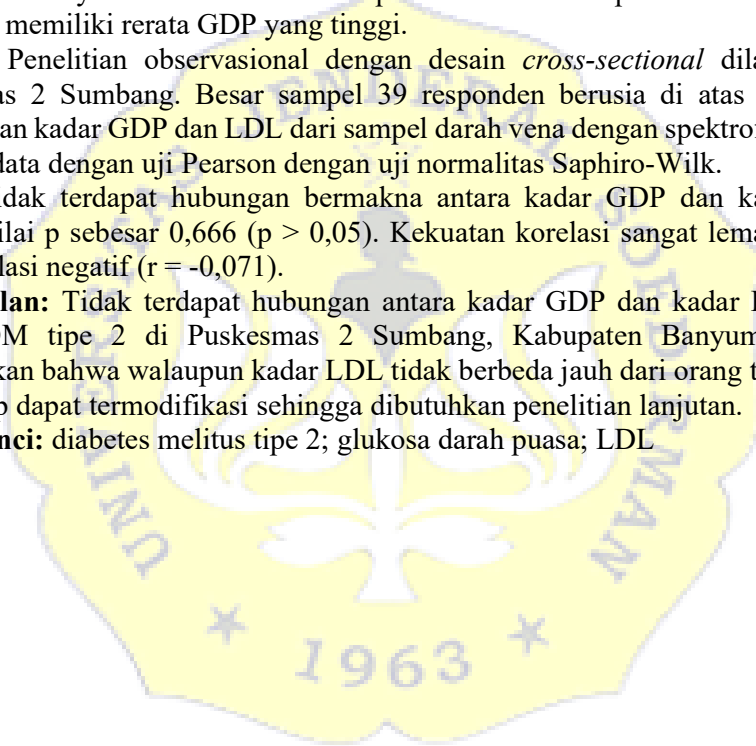
**Latar Belakang:** Diabetes melitus (DM) merupakan penyakit kronis karena gangguan sekresi dan/atau aktivitas dari hormon insulin. Prevalensi penderita DM secara global pada tahun 2019 mencapai 463 juta penderita. Komplikasi dari DM yang paling menyebabkan kematian adalah penyakit kardiovaskuler akibat aterosklerosis yang disebabkan oleh penumpukan LDL yang termodifikasi oleh kondisi hiperglikemia pada penderita DM. Penelitian mengenai hubungan kadar glukosa darah puasa (GDP) dan kadar LDL dilaksanakan di Puskesmas 2 Sumbang, Kabupaten Banyumas karena menurut penelitian terakhir pasien di Kecamatan Sumbang memiliki rerata GDP yang tinggi.

**Metode:** Penelitian observasional dengan desain *cross-sectional* dilakukan di Puskesmas 2 Sumbang. Besar sampel 39 responden berusia di atas 35 tahun. Pengukuran kadar GDP dan LDL dari sampel darah vena dengan spektrofotometer. Analisis data dengan uji Pearson dengan uji normalitas Saphiro-Wilk.

**Hasil:** Tidak terdapat hubungan bermakna antara kadar GDP dan kadar LDL dengan nilai p sebesar 0,666 ( $p > 0,05$ ). Kekuatan korelasi sangat lemah dengan arah korelasi negatif ( $r = -0,071$ ).

**Kesimpulan:** Tidak terdapat hubungan antara kadar GDP dan kadar LDL pada pasien DM tipe 2 di Puskesmas 2 Sumbang, Kabupaten Banyumas. Perlu diperhatikan bahwa walaupun kadar LDL tidak berbeda jauh dari orang tanpa DM, LDL tetap dapat termodifikasi sehingga dibutuhkan penelitian lanjutan.

**Kata Kunci:** diabetes melitus tipe 2; glukosa darah puasa; LDL



**CORRELATION BETWEEN FASTING BLOOD GLUCOSE LEVELS AND  
LDL LEVELS OF TYPE-2 DIABETES MELLITUS PATIENTS IN  
SUMBANG II PHC, BANYUMAS REGENCY**

**ABSTRACT**

**Background:** Diabetes Mellitus (DM) is a chronic disease caused by dysfunction in secretion and/or activity of insulin hormone. Global prevalence of population with DM in 2019 was 436 millions people. Cardiovascular diseases is one of type-2 DM complications with the highest mortality rate caused by LDL modification from hyperglycemic state which caused atherosclerosis in type-2 DM patients. Research about correlation between fasting blood glucose level (FBG) and LDL levels was conducted in Sumbang II Public Health Centre (PHC), Banyumas Regency due to its patients' higher FBG levels mean based on previous research.

**Method:** Observational research with cross-sectional design was conducted in Sumbang II PHC. 39 respondents with age above 35 years old participated for this research. FBG and LDL levels from vein blood was measured with spectrophotometric method. The results were analyzed with Pearson correlation method and Saphiro-Wilk for its normality test.

**Result:** No significant correlation is found between FBG and LDL levels with  $p$ -levels 0.666 ( $p > 0,05$ ). The correlation strenght is very low with negative direction ( $r = -0.071$ ).

**Conclusion:** There is no significant correlation between FBG and LDL levels of type-2 DM patients in Sumbang II PHC, Banyumas Regency. Significant attentions is needed since LDL modification still occurs even when there is no significant level difference from non-DM people and needs further study in the future.

**Keywords:** fasting blood glucose; LDL; type-2 diabetes mellitus

