***The Relationship between Monounsaturated Fatty Acid (MUFA) Intake, Polyunsaturated Fatty Acid (PUFA) Intake, Waist Circumference, and Total Cholesterol Levels among Patients with Hypercholesterolemia (A Case Study in Jember Regency)***

***Pramudyo Wastu Sadirgo***

*Clinical Nutrition Study Program*

*Health Department*

## *ABSTRACT*

*Hypercholesterolemia is one of the major risk factors for cardiovascular disease, with an increasing prevalence in Indonesia. Several factors are known to influence total cholesterol levels, including the intake of Monounsaturated Fatty Acids (MUFA), Polyunsaturated Fatty Acids (PUFA), and abdominal obesity as indicated by waist circumference. MUFA and PUFA contribute to improving lipid metabolism, while increased waist circumference reflects visceral fat accumulation associated with lipid metabolism disorders. This study aimed to analyze the relationship between MUFA intake, PUFA intake, waist circumference, and total cholesterol levels among patients with hypercholesterolemia in Jember Regency. This study employed an observational analytic method with a cross-sectional design. The study population consisted of 108 patients with hypercholesterolemia from nine public health centers in Jember Regency selected using the Slovin formula and distributed proportionally through stratified proportional sampling. MUFA and PUFA intake data were collected using a Semi-Quantitative Food Frequency Questionnaire (SQ-FFQ), waist circumference was measured using a flexible measuring tape, and total cholesterol levels were assessed using the Easy Touch GCU device. Data were analyzed using Kendall's Tau correlation test. The results showed that there was no significant relationship between MUFA intake and total cholesterol levels (p-value = 0.913; r = 0.010), no significant relationship between PUFA intake and total cholesterol levels (p-value = 0.590; r = -0.048), and a significant relationship between waist circumference and total cholesterol levels (p-value = 0.002; r = 0.283). This study concludes that MUFA and PUFA intake were not associated with total cholesterol levels, whereas waist circumference was significantly associated with total cholesterol levels among patients with hypercholesterolemia in Jember Regency.*

***Keywords:*** *Hypercholesterolemia, MUFA, PUFA, Waist Circumference, Total Cholesterol*