

SCREENING AND IMPROVEMENT OF METABOLIC BIOMARKERS OF DIABETES MELLITUS THROUGH DETERMINANT FACTORS IN THE HEALTH CENTER MAKASSAR CITY

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BACKGROUND: Metabolic biomarkers refer to biological indicators that can measure or evaluate metabolic processes in the body. These biomarkers can provide information about the health and function of organs and can be used to monitor metabolic changes due to certain diseases or conditions. Blood Glucose is the primary glucose blood used as a source of energy biomarkers by body cells. It can be used to measure the risk of diabetes mellitus and monitor diabetes management. This study aims to determine the screening and analyze the effect of determinant factors on improving metabolic biomarkers in the incidence of Diabetes Mellitus in the Health Center Makassar City.

METHOD: The research method used is quantitative research with a Cross-Sectional Study approach. The research sample was 102 people, samples were taken using the Simple Random Sampling method. Data were obtained using questionnaires and random blood sugar level measurements. Data analysis was carried out univariately and bivariate using the chi-square test and multivariate.

RESULTS & DISCUSSION: The results of this study indicate that controlling blood pressure ($p < 0.000$), cholesterol levels ($p < 0.000$), doing physical activity ($p < 0.006$), and regulating diet ($p = 0.002$) can improve metabolic biomarkers in patients with diabetes mellitus. Metabolic biomarkers in diabetes mellitus are blood sugar or hyperglycemia, which occurs when too much glucose is in the blood. The cause of high blood glucose is when the body has too little insulin hormone or if the body cannot use insulin properly (insulin resistance). Other hormones can also contribute to the development of hyperglycemia. Excess cortisol (stress hormone) or growth hormone, for example, can cause high blood glucose.

CONCLUSION: This study suggests that health workers at community health centers increase counseling on controlling blood glucose, maintaining diet and physical activity, conducting screening for early detection of diabetes mellitus, and implementing chronic disease management programs.

KEYWORDS: Biomarker Metabolic; Determinant Factors; Diabetes Mellitus